THE PSYCHOPATHOLOGY OF HYSTERIA

CHARLES D. FOX

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Psychopathology of Hysteria

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THE GORHAM PRESS
BOSTON

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12142 Wad.

THE GORHAM PRESS, BOSTON, U. S. A.

PREFACE

Than hysteria, probably there is not any disease which is more interesting, which has been more misunderstood, which is capable of causing a greater diversity of manifestations, and about which more has been written. Its absorbing interest is due mainly to the peculiar character and unlimited possibilities of its expression. Surely, a disease is worthy of the consideration which has been bestowed upon hysteria when it is capable of causing such diverse symptoms as paralysis, convulsions, blindness, multiple personality, and which can occur in epidemics that, in the past, have caused greater disturbance to whole nations than a war would have occasioned. Its history and literature, which would fill a spacious library, show that from the days of the Grecian oracles, or of the sibyls of even more distant ages, to the present trance mediums, the unfortunate victims of the disease have been subjected alternately to persecution as witches and demons, or to devotion as the inspired source of wisdom and of supernatural knowledge.

It is only recently, and through psychologic means, that hysteria is beginning to be understood. The credit for elucidation of problems of the disease is due principally to the French. In fact, the psychology characteristic of their

nation truly may be said to have been based upon studies of the abnormal psychology of hysteria. The present era of enlightenment concerning the disease may be considered to have been initiated by Bernheim. It is his interpretation—which to a great extent has stood the test of time—of the phenomena of hypnotism that enabled this earnest investigator to grasp the mysteries of hysteria in a manner which never before had been possible. In spite of the greatest opposition and acrimonious controversy, his views of the causation and nature of many of the symptoms of hysteria are obtaining at last the recognition and acceptance which they deserve. Babinski, for instance, the most ardent of the revisionists, eagerly contends now, as Bernheim insisted many years ago, that suggestion is of the utmost importance in the genesis of symptoms of the disease. It is to Janet that credit is due for the theory that dissociation of the personality is the underlying mechanism of hysteria, and also for innumerable and valuable experimental researches concerning the psychic nature of the disturbances of sensory perception. Of great importance, too, was his exposition of the somnambulistic qualities of many of the manifestations.

In this country, the most fruitful investigations have related to dissociation of the personality; a subject which has received considerable attention. Probably the most extensive and the

most valuable contributions on the clinical study of this condition have been made by Morton Prince and by Boris Sidis.

Finally, the studies of Sigmund Freud, subjected at first to neglect and later to opposition, now are exerting an enormous influence in revising our conceptions of hysteria. The exhaustive manner in which this Austrian studied his cases is remarkable. Not only have his observations been a revelation of the importance of psychic insults in the etiology of the disease, and of the remarkable manner in which dissociated or submerged memory complexes dominate the hysteric, but they have been of the greatest consequence in showing how normally one's actions and mode of thinking are largely determined by motives of which one is unconscious.

In spite of the multitudinous volumes in which the disease, or certain of its symptoms and mental states are described, but few English books have appeared in which the disease as a whole has been treated on the basis of the results of modern psychopathologic researches. In the belief that such a volume may not overburden the already great ranks of those dealing with the disease, the author has modestly attempted to meet this deficiency. In conclusion. this work is based upon, in fact is an exposition of, the modern conception of hysteria as entertained by the foremost contemporary students

of abnormal psychology. A not inconsiderable amount of personal experimentation and clinical investigation has been drawn upon, and, not desiring the responsibility to rest upon the shoulders of others, it is necessary to acknowledge, also, that some personal views concerning the disease and its symptoms have been incorporated.

Philadelphia, Pa.

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PSYCHOPATHOLOGY OF HYSTERIA

PSYCHOPATHOLOGY OF HYSTERIA

CHAPTER I

Preliminary Considerations

THE normal personality may be regarded as a highly mutable synthetic product of memories of past instruction and experiences as modified by present perceptions, either of external stimuli—exogenous—or of the countless number of various sensory impressions arising as a result of the activity of the different structures of the body—endogenous or coenesthetic. By reason of the modifying influence of present external stimuli one's personality seems to undergo the greatest variation in accordance with the difference in his reactions to diverse environments; the mode of reaction suitable for one kind of environment being of pathologic import if displayed in another. As the memories of all experiences are fused with the personality, and as memories are never destroyed except by gross organic disease of the brain, every event in a person's life inevitably exerts an influence upon his individuality—upon his manner of reacting to his environment.

In connection with the laws that "all nervous function is conditioned upon sensation," and that all sensory impressions invariably become transformed into immediate or delayed movement, or action, W. K. Walker states: "That which is present in the mind at any given instant is therefore due to its past experiences; to previously experienced sensations, impulses, ideas, and emotions. These 'stored up' 'sensations tend to final transformation into action'—that is, either action or restraint of action,—not only according to the laws governing all neural and mental manifestations in general, but, in particular, with the gradually acquired habit of reaction of the individual organism." (Med. News, Jan. 28, 1905.)

By saying that we have forgotten something, we mean only that we are unable at the time to reproduce the memory—to raise the memory above the threshold of consciousness. In spite of our efforts to recall them, such memories remain dormant only because we have been unable to obtain the proper association of ideas, and at any subsequent time reproduction can be effected, providing that the proper stimulus is called into play. Now, even though events have been "forgotten," still their dormant memories continue subconsciously to influence the actions, feelings, and mode of thinking of the individual. We act more or less in accordance with our feelings and our general conceptions, and though

we may forget in what manner these have been originated, yet the influence of the underlying forgotten occurrences persists. One may not remember just how the knowledge was first acquired that heat may cause pain, but the deficiency in our ability to reproduce these memories does not impair the value of a conception which has largely been the product of painful experience.

The acquisition of knowledge, through personal experience, requires at first the conscious memory of particular causes and effects, but later, these details subside below the level of consciousness, unless the occurrence has been noteworthy, and only general conceptions remain. Consequently, my knowledge that fire may cause pain does not necessitate recollection of the many times when fire has caused me to experience pain. In this respect, then, a certain amount of submergence of memories is a normal concomitant of psychic development, and its value lies in the freedom which it insures from being mentally encumbered with countless and useless facts. Accepting as true these well known characteristics of the human mind we may conclude that, excepting possible hereditary factors and the effects of education, an individual's personality is of a certain nature, mainly because of the character of memories of countless experiences in which he has taken part; these memories, whether conscious or submerged, becoming

integrals in the continual growth of the personality.

It is for this reason that one evil act paves the way for another, and that no one can do wrong once with the intention afterwards to forget about the unpleasant act, and thus be free from harmful consequences. Each act or thought of an individual tends towards the recurrence of similar acts or thoughts—the production of a habit. In terms of materialism, this fact is explained as being the result of lowered synapsal resistance. Otherwise, a certain kind of reaction having occurred in response to a given stimulus, we assume that, whether conscious or dormant, the memory of the experience largely determines repetition of the same reaction when a similar stimulus occurs. The economics of this tendency are easily grasped, for all forms of normally automatic activity are but examples of acquired reflexes due to habitual modes of volition, and if it were not for such automaticity one's attention would constantly be employed by the performance of the ordinary acts of life, at the expense of higher forms of activity and of acquisition of knowledge.

To the normal process of forgetting, let us apply the term dissociation with the understanding that this designation implies merely that though certain memories have subsided below the level of consciousness their influence

still persists in that they exert a continual effect upon modes of thinking and of acting. In discussing this question Ernest Jones has written: "We are beginning to see man not as the smooth self-acting agent he pretends to be, but as he really is, a creature only dimly conscious of the various influences that mould his thought and action, . . . " (Rationalization In Every-Day Life, Jour. of Abnormal Psych., Vol. 3, p. 168.) No matter if one does think that he knows the mechanism and all the motives of any given act or thought, these have been originated or modified by memory complexes which are more or less completely dormant. Upon becoming acquainted with an estimable person, and without knowing the cause, one may experience towards him an "instinctive" dislike. Later, the true reason flashes into mind: it was because the object of aversion resembles another individual who had wronged him in some manner.

If we should stop a moment to consider one of our most cherished ideas, perhaps we would not be able to recall the reasons which had led us to the adoption of that particular belief; yet we know that there were a number of factors which determined its growth, and which continue subconsciously to control us. Often we hear some one honestly make a positive assertion with all the assurance that would be warranted by thorough knowledge of the subject.

Let a question arise concerning the grounds for his convictions and at once he is at a loss for data with which he can justify his assertion, even though he knows that formerly he was cognizant of these.

Our supposed knowledge of the motives for our thoughts and actions is exceedingly superficial and illusory, and constantly we are the unconscious slaves of our past. In this sense, at least, we have not any freewill, and we are but the automata with superadded consciousness about which so much has been written; reacting as we do to our present environment, according to the influence, more or less unconscious to us, of the past surroundings in which we have been placed merely as a matter of accident, as far as our own inclinations were concerned. In the last few years even more acceptably might have been written Spinoza's celebrated remark to the effect that "—— men think themselves free, inasmuch as they are conscious of their volitions and desires, and never even dream in their ignorance, of the causes which have disposed them to wish and desire." (Ethica, Elmes trans.)

To illustrate the agency of subconscious memory complexes there is no better example than the "Frost King" episode in the case of Helen Keller. When twelve years of age Miss Keller wrote a story, which she called the "Frost King," and it was published in one of the Perkins's Institution Reports. Afterwards it

was discovered that this story was a duplicate in ideas—and in places even words—of another story which had been read to her three years before, or a little over one year after she had acquired the faculty of language—the sign language. Miss Keller was totally unable to remember the original, and, until convinced by the facts of the case, she was equally positive that hers was entirely the product of her own mind. (The Story of My Life, 1903.) It must be remembered that this excellent instance of unconscious plagiarism is an unusually exaggerated one, because of the limited amount of knowledge possessed at that time by Miss Keller, and because of the fact that by reason of certain mental characteristics and of the difficulties under which she labored what she had once learned subsequently tended to almost complete reproduction, without, however, being coupled with the associated ideas of source. For this reason a thought might be considered by her to be original, when, in reality, it arose from her subconscious store-house of what had been read to her. The Hindoo cycle, in the case of Hélène Smith, almost parallels the above occurrence both in the accuracy and in the unconsciousness of the plagiarism. (Flournoy: From India to the Planet Mars, 1901.)

The tendency to unconscious plagiarism is not abnormal; nor is it unusual. Let one who is open to conviction read an authoritative book.

If he reads much, a year later he may be unable to recall the facts and theories which it contained, but, nevertheless, these continue to exert an influence in determining his own conceptions, though he may be unaware of the fact. A year or so later let him read the book again, and he will be surprised to find that beliefs which he thought not only were original but were of recent origin, were really derived from his first reading of the work.

The following quotation from Hammond is a fine example of the activity of normally forgotten memories: "A friend has related to me some circumstances in his own case similar to the above, and illustrating the same points. In the course of his practice as a lawyer, it became necessary for him to ascertain the exact age of a client, who was also his cousin. Their grandfather had been a rather eccentric personage, who had taken a great deal of notice of both his grandsons—his only direct descendants. He died when they were boys. My friend often told his cousin that if his grandfather were alive there would be no difficulty at getting at the desired information, and that he had a dim recollection of having seen a record kept by the old gentleman, and of there being some peculiarity about it which he could not recall. Several months elapsed, and he had given up the idea of attempting to discover the facts of which he had been in search, when, one night, he

dreamed that his grandfather came to him and said: 'You have been trying to find out when J ——— was born; don't you recollect that one afternoon when we were fishing I read you some lines from an Elzevir Horace, and showed you how I made a family record out of the work by inserting a number of blank leaves at the end? Now, as you know, I devised my library to the Rev. ———. I was a d—d fool for giving him books which he will never read! Get the Horace, and you will discover the exact hour at which J ———'was born.' In the morning all the particulars of this dream were fresh in my friend's memory. The reverend gentleman lived in a neighboring city; my friend took the first train, found the copy of Horace, and at the end the pages constituting the family record, exactly as had been described to him in the dream. By no effort of his memory, however, could he recollect the incidents of the fishing excursion.'' (Sleep and Its Derangements, 1869.) What is of particular interest in this case, is the fact that the dissociation was so complete that conscious recollection was impossible, yet complete synthesis was obtained during the dream. Furthermore, in the waking state, the lawyer was totally unable to recognize the personal nature of the memories which had been recovered.

Now, let us suppose that independently of consciousness dissociated, or submerged, mem-

ories become integrated with one-another, or that a massive dissociation of complexes from consciousness should occur, in consequence of some psychic insult, and that the dissociated fragment of what constituted the more or less normal personality took on activity irrespective of the present states of consciousness of the individual. Such processes naturally constitute pathologic disaggregation of personality, and if the offshoot were massive enough, a secondary personality would be produced.

As a working hypothesis let us postulate that all the functional neuroses, or more properly psychoses, are dependent upon disintegration of personality, and that as such they are merely the result of pathologic exaggeration of what is a normal component of psychic development. Then neurasthenia, psychasthenia, hysteria, and multiple personality would be clinical syndromes having a common origin; the underlying disintegration being rudimentary in the first instance, more decided and often suspected even by the patient in the second one, still more developed and not surmised by patients suffering with the ordinary types of hysteria, and massive enough to be complete in the condition known as multiple personality.

By means of this prevalent and well founded hypothesis, almost every symptom of hysteria can be explained as satisfactorily as the manifestations and pathologic changes of any organic

disease. Accordingly, amnesia results from abnormally complete or massive dissociation from consciousness of certain memories, and the proof of its functional character can readily be adduced by means of reproduction of the lost memories through the agency of certain well known procedures. Anæsthesia, analgesia, amaurosis, deafness, etc., would imply, on the other hand, that sensory perceptions had not become integrated with consciousness—that they had been appropriated, so to speak, by the dissociated components of the former personality. Experimentally, this explanation has been amply verified.

After adducing experimental observations of Pierre Janet, Paul Janet, Binet, Pitres, and Bernheim, concerning phenomena of hysteria, no less authority than William James states: "It must be admitted, therefore, that *in certain persons,* at least, *the total possible consciousness may be split into parts which coexist but mutually ignore each other,* and share the objects of knowledge between them. More remarkable still, they are *complementary.* Give an object to one of the consciousnesses, and by that fact you remove it from the other or others. Barring a certain common fund of information, like the command of language, etc., what the upper self knows the under self is ignorant of, and *vice versa.*" (The Principles of Psychology, Vol. 1, p. 206, 1905.)

At best, our knowledge of mental processes is superficial. Moreover, the difficulty of describing normal and abnormal psychic phenomena is great. Any language necessarily must be a faulty vehicle for conveying the thoughts of one individual to another. A group of words is incapable of reproducing in one person the exact conceptions of another. To this difficulty is added one's inability to describe briefly and accurately any process. Suppose we subject a remark to the same kind of criticism that would be attracted by the description of a mental process. By reason of poverty of words and inexactness of verbal representation we say briefly that a cigarette is smoking, and that a man is smoking, or that the paper burns, and that he is burning the paper. In reality, the man neither smokes nor burns the paper, and, to say nothing of his own part in these acts, these phrases are most superficial and condensed representations of a variety of most complex chemical processes. In the same manner causation always must be obscure. What was the cause of destruction of the paper? The immediate one was oxidation. This was superinduced by heat which the man had applied. But then the endless chain arises concerning the causes of the man wishing to destroy the paper that was not destroyed, but whose chemical components were merely dissociated, to be recombined in a different manner and with the addition of oxygen.

In describing the psychic mechanism of hysteria we say that the disease is caused by dissociation of consciousness, and that this process causes increased suggestibility, then, in the next breath, that further dissociation may result as the effect of this symptom. These statements only imply, however, that a vicious circle is formed. The same process is apparent in the use of hypnotism. By means of suggestion a subject is hypnotized. The increased suggestibility produced by this state of dissociation then enables us to induce more readily further dissociation.

Two individuals being exposed to the same psychic stress, one may develop hysteria, and the other psychasthenia; the difference in the two syndromes being equivalent to difference in the modes of feeling, thinking, and acting of the two persons. The condition of the one who developed psychasthenia is said to be due to dissociation of the personality and that as a consequence, fear and expectant attention appear as symptoms. Then, like the vicious circle of hysteria, these symptoms, by causing further dissociation, induce various other phenomena.

In a gross materialistic way the pathologist is satisfied when, with the assistance of stains, microscope, and other laboratory apparatus, he finds that certain lesions occur more or less constantly in some disease. He seems to be contented with this knowledge—he has discovered

the cause of a disease—yet the discovery of these lesions does not explain the cause for the same reason that dissociation of personality does not account for the production of the psychoneuroses. There is an inherent tendency for one to believe that he knows much about a disease merely because he possesses some knowledge of the anatomical changes which are really concomitants or secondary causes. To say that lesions of the islands of Langerhans are the cause of diabetes does not explain the disease. Not only is there a cause, or causes, for this sclerosis, but there may be a whole succession of pathological processes that precedes its development. The greater part of pathology consists only in a superficial knowledge of terminal processes, and the only advantage it has over psychopathology is that scales, test tubes, and a microscope lend an aspect of scientific precision which cloaks in a satisfactory manner our real ignorance of causality. In spite of what the materialistic pathologist would have one believe, psychopathology is not entirely a matter of groundless theories based upon the morbid introspection of deviates. With the assistance of association reaction time experiments, the psychogalvanic reflex, pulse reactions, etc., the psychologist can "measure" the emotions and detect and reveal subconscious ideation.

In the early studies of hysteria, and, in fact, even to the present, it was customary to describe

a number of symptoms as characteristic, or stigmatic, of the disease. Among the most important were anæsthesia and concentric contraction of the visual fields. We are beginning to understand, now, that these "stigmata" are only accidental phenomena, which, except when created by reason of faulty methods of examination, are rather unusual if not rare. It was only by reason of the suggestive technique of the ordinary examination that, until recently, the occurrence of "stigmata" was so common.

The recent discussion of hysteria before the Paris Neurological Society brought out the quite general recognition of the fact that the symptoms of the disease, as many have intimated for years, are caused by suggestion, and that what have been called the stigmata usually owed their origin to examinations by physicians who disregarded, or were unaware of, the effects of suggestion in causing the conditions which they sought. Certain members averred that by attempting to avoid the pathogenic effects of suggestion during their examinations of hysteric patients, they no longer find anæsthesia and the like, provided that the patients had not been examined previously by others. In fact, the tendency of some of the members seems to have been to ascribe to suggestion all the symptoms of the disease. According to Babinski, for instance, a patient is not hysteric whose symptoms are incapable of being reproduced by suggestion

and removed by persuasion. Yet Babinski was one of those who formerly opposed the contentions of Bernheim, to the effect that the stigmata of hysteria are merely the product of suggestion. Consequently, his present views possess greater significance than if he had upheld the theory from the beginning.

If it is desirable to establish stigmata of hysteria let us confine ourselves to the only symptom which is characteristic of the disease. The only one whose presence is at all constant, and whose pathogenic importance cannot be overestimated, is pathologic increase in suggestibility. This veritable stigma has been a prolific cause of blunders in the past studies of the disease. It is by reason of its agency that any enthusiastic investigator ordinarily and unintentionally can cause whatever he may wish to find in support of his views; no matter what these may be. Thus, one can appear to demonstrate that the symptoms of hysteria are due only to intentional simulation, or that any symptom is essential to the existence of the disease. At la Salpêtrière, for instance, there was created a typical epidemic of hysteric convulsions which influenced for years the study of hysteria, and which was the effect solely of an elaborate suggestive training and of psychic contagion.

Since Bernheim's recognition of the danger of misinterpretation of the occurrence of symp-

toms of hysteria through the more or less unconscious use, or rather abuse, of suggestion by the observer, the understanding of the disease has advanced considerably at the expense of numerous theories and classic experiments which owed their very existence to suggestion. Many years elapsed, though, before the full significance of the well known cautionary "beware of suggestion" of this pioneer became appreciated. The delay was due to the powerful antagonism exerted by Charcot in consequence of his total disbelief in the effects of suggestion. In fact, the experiments of Charcot and his followers upon hysteric patients were rendered valueless by reason of their disregard of suggestion. To no other factor than ignorance of the possibilities of suggestion can be ascribed the ludicrous experiments and theories of Luys,* and others of the Salpêtrière school, concerning the wonderful effects of magnets, of metals, and of medicine in sealed glass tubes.

It has been demonstrated conclusively, that because of this increased susceptibility to suggestion, so invaluable for therapeutic purposes, prolonged, unnecessary, and repeated neurologic examinations of hysterics, their association with other victims of the disease, and their demonstration before clinics, where they hear

(*Reported and exposed by Ernest Hart in Hypnotism, Mesmerism and the New Witchcraft, 1896.)

descriptions of their symptoms and of the disease, both create symptoms and prolong those already in existence. Therefore, one can readily appreciate that the earnest and faultily conducted studies and the clinical exploitation of these cases formerly was responsible for an incalculable and irreparable amount of injury.

Recognizing the importance of increased suggestibility in producing symptoms, we can commonly interpret the classic stigmata as artificial creations. As such, they have almost as much diagnostic value as formerly; providing that their production, which usually cannot be considered justifiable, is thought necessary. Then, too, the acceptance of these views leads to a better understanding of the symptomatology of hysteria, and, furthermore, we will have advanced one step in the pursuit of the first cause.

With the justification afforded by the conceptions of the modern French neurologists, as briefly indicated in these few prefatory notes, the symptomatology of hysteria will be largely considered upon a basis of suggestion, and the effects of the abnormally great suggestibility in creating or in modifying symptoms intentionally will be reiterated with the purpose of calling attention to the possibilities of unconscious abuse of this characteristic of the disease.

A fact which must be borne in mind, one which a priori must be true, is that each per-

son's hysteria must differ just as the mental characteristics of all individuals vary. Moreover, the kind of symptoms possessed by a patient depends entirely upon the nature of the incidental exciting causes, upon the personal equation, upon psychic contagion from others, and upon the effects of accidental suggestion.

Bernheim believes that it is impossible to define hysteria because it is not a morbid entity. According to Lasègue hysteria never has been defined and it never will be. In a more hopeful spirit Grasset does not despair of any progress, but he believes that the definition is still impossible. In spite of the restrictions of these, and other neurologists, the definitions of hysteria, like those of insanity, are almost as numerous as the writers who have described the disease. Having the sanction, then, conferred by numerous precedents, and recognizing the impossibility to define satisfactorily such a protean malady, the following may be regarded merely as a provisional definition:

Hysteria may be designated a psychoneurosis, or so-called functional nervous disease, which, tending to develop particularly in those predisposed by neuropathic heredity and by vicious environment, is dependent upon disintegration of personality and is characterized by symptoms originating from the morbid control of the body by subconscious states; whose symptoms

can be shown to be but exaggerations or perversions of normal modes of feeling, of thinking, and of acting; a disease which is distinguished by a peculiar type of temperament, faulty adaptability to environment, pathologic increase in suggestibility resulting in the liability to develop many kinds of phenomena, and the possibility of the appearance of any one or more of a vast number of "accidents" arising from morbid ideation.

CHAPTER II

Etiology

HEREDITY. In common with the other psychoneuroses, hysteria is thought usually to occur in those whose nervous system is rendered, as a consequence of neuropathic heredity, more susceptible than usual to functional derangement. Undoubtedly this is true, but the occurrence of hysteria does not necessarily always imply the instrumentality of heredity, or the existence of a state of organic nervous degeneracy. In fact, the family history is above reproach in about 10% to 20% of cases of hysteria. If one accepts the extreme views upon degeneration promulgated by Nordau* and others, then but few families could be considered entirely free from some variety of hereditary psychopathic taint.

It is best, therefore, to entertain conservative views about this matter and to limit our conception of the influence of neuropathic heredity to those cases in which a history of epilepsy, insanity, dipsomania, or distinct criminal tendencies can be found in the immediate ancestry.

Direct inheritance of hysteria may be possible, but the more apparent deleterious effects

*Degeneration, 1897.

of constant association of the offspring with a hysteric parent is sufficient to account for those instances in which the disease is encountered in two consecutive generations of a family.

A broad minded view of the part played by heredity in the production of hysteria is to hold the opinion that the disease is potential in every one, and that the potentiality becomes more decided when neuropathic heredity exists. Then the relationship between hysteria and direct heredity is practically the same as that in tuberculosis; direct inheritance of either disease being rare, and the usual character of transmission being that of increased susceptibility. The aptness of this comparison becomes more evident if one stops to consider the many families in which, despite the existence of psychoneuroses in the parents, the children present merely a nervous type of temperament, which is not decided enough to be regarded pathologic.

The potentiality of the disease in every one may be likened, also, to the general susceptibility to its analogue, hypnotism. With the exception of the insane and of the psychasthenics, whose peculiar mental state renders hypnosigenesis difficult, but not impossible, as Janet asserts, about 90% of people are capable of being hypnotized; our failure to succeed with the remainder probably being due to lack of patience, and, when the attempt is not made

for therapeutic purposes, to the absence of a good reason for its induction.

Environment. Those who have to deal with the psychoneuroses hear the complaint constantly that nervousness has been engendered, as well as aggravated, by that of those with whom the individual has been in constant association. It is usually the continual irritation, and the state of expectant attention, or auto-suggestion, which is induced by the propinquity of hysteric parents that increases the liability of the progeny to develop the disease. Then, having developed, heredity receives the blame. Under the caption psychic contagion the influence of environment will receive further attention.

Faulty Education. As hysteria is commonly disposed to attack those who have not acquired sufficient emotional stability, self-control, and the proper appreciation of the relation between self and the outside world, any system of education which is deficient in developing these qualities may lead to the production of the disease.

The pernicious effect of over indulgent parents is great. Faulty conceptions of external relations and faulty modes of reacting to other environments are produced, and these, together with the effects of the parent's habitual disregard of emotional outbursts, constitute a kind of temperament which cannot be other than

conducive to hysteria—if not already a feature of the disease. Few, indeed, are the "spoiled" children who are unselfish, whose tempers are reasonably controlled, and who are capable of developing into self-reliant men and women! Fortunate are the children of the poor in that they are less apt to be the recipients of such undesirable attentions!

Let not the impression be gained from these sentences that hysteria is most frequent in children. The child is father of the man, and as the adult's temperament and mode of reaction is the outcome of that of the child, early educational methods are of the greatest importance either in the causation or in the prophylaxis of psychoneuroses.

Age. The emotional disturbances characteristic of pubescence, and the unstable psychic equilibrium of maturity, the period of greatest exposure to the stresses of life, naturally favor the onset of hysteria. This is shown by the following table constructed from a dispensary service from which patients younger than 15 years were excluded; these cases being treated in another department:

Age.	15-20	25	30	35	40	45	50	55	60	65
%	23	13	11	17	10	5	8	6	5	2

Sex. Because of their inherent emotionalism and relative inferiority in logical reasoning and philosophical acceptance of the various inevitable stresses of life, females are more sus-

ceptible to hysteria than are males. The difference in the incidence of the disease in the two sexes is explained by Ziehen as being due to the fact that the psychic reactions which normally characterize the female sex closely resemble those essential to hysteria. (Modern Clinical Medicine, Diseases of the Nervous System, p. 1048, 1908.) It is the absence, too, of the hardening effects of the greater responsibilities, which are shouldered by men, that is a great factor in producing this inequality.

Even more unreliable than usual are the statistics concerning hysteria. As all the psychoneuroses are only clinical syndromes dependent upon the same psychic abnormality —disaggregation of personality—it is impossible for neurologists to come to an agreement over the disposition of the borderland cases. However, most stimulating to progress in the study of this great and important group of diseases is the difference of opinion concerning their classification. The personal element enters so largely into the collection of these statistics that, according to the difference in their conceptions of hysteria, various statisticians have collected figures which vary as much as 50%. With this qualification, then, which applies also to the other figures in these pages, the ratio of hysteria in males and females lies between 1 to 3 and 1 to 6. Careful examination of the records of 100 consecutive cases of hysteria, to-

gether with revision of the diagnosis when this was considered necessary, showed that 25% of the cases were males.

Among males, by no means is it the effeminate man who is most apt to develop hysteria. Experience shows that the disease attacks more frequently the hard working and often prosaic man; the reason being that in males the manifestations almost invariably follow traumatism, and, consequently, those men who are most exposed to physical injury are the ones most liable to develop hysteria. Both for this reason, and on account of the less dangerous occupations followed by women, traumatic hysteria occurs more frequently in men. A noticeable feature of the disease in men is its severity, and its tendency towards what appears to be monosymptomatic expression; such manifestations as paralysis, mutism, and psycholeptic attacks being the ones most commonly observed.

Social Factors. Though the relatively deficient amount of education possessed by the rural population and the hard working poor of the cities renders them more susceptible to the acute epidemic form of the disease they are less inclined to be subject to essential hysteria than those of the upper urban classes. The comparative freedom of the former is due to the fact that they escape the over refining influences of a life of idleness, emotionalism, and luxury, and that their psychic equilibrium is

rendered more stable by what usually is not an abnormal amount of responsibility. Other important reasons for this difference are afforded by the more self-reliant manner in which their children are brought up, and by the fact that the greater freedom of these children causes them to be less exposed to psychic contagion in case one or both parents are neurotic. Then, too, the fact that the poor marry early possesses significance in that it lessens materially the exposure to a certain kind of emotional stresses whose importance in the etiology of hysteria has been shown to be too great to be ignored.

As the dregs of the city community is composed of individuals who follow lives of inordinate excitement and whose passions are unaccustomed to self-restraint, and as this social element contains an undue proportion of the truly degenerate, hysteria is not only frequent but it is encountered in its most highly elaborated forms. The disease is most common, therefore, in the extremes of society.

Occupation. Certain occupations are attended with an increased liability to the development of hysteria because of the emotionalism and unsettled mode of living that they necessitate. Particularly is this the case when an imaginative or artistic, one might almost say hysteric, temperament is one of the requisites. Thus, artists, musicians, authors, and

members of the dramatic profession, are frequently attacked by the disease. The excessive anxiety and alternation of intense emotions entailed by the character of their occupation increases the predisposition of stock traders and others whose fortunes are largely dependent upon chance.

Race. As the French were the first to study extensively and to write about hysteria, it was formerly thought that this disease was encountered but rarely outside of France. Since physicians of other countries have become better acquainted with hysteria, and thus are able to differentiate its major manifestations from those of other diseases, this erroneous idea has disappeared. Because of their emotional temperament, however, the condition probably is more prevalent and more highly developed in people of the Latin races.

Although infrequent as a distinct endemic disease, epidemics of hysteria, usually of a religious nature, are not uncommon among the uncivilized. Indeed, symptoms of hysteria are frequently observed in connection with the religious ceremonies of savages, and these manifestations may be the true source of certain religious beliefs.

Climate.—Hysteria is more frequent in tropical countries because these are inhabited mainly by the Latin races. The mental effects of a new environment and of the physical discomfort caused by an unaccustomed amount of

heat, together with the stimulating effects upon emotional activity of this relatively excessive heat, results in the production of an unusual number of cases of psychoneuroses among Northerners who have emigrated to the tropics. Americans residing in the Philippines seem to be particularly prone to develop neurasthenia. According to Louis H. Fales "nearly all American women and a large proportion of men who have been in the Islands one year or more suffer, at least to some extent, with nerve exhaustion. It is conservative to state that 50% of the women and 30% of the men suffer with neurasthenia to such an extent that they are in a state of semi-invalidism." (Amer. Jour. of the Med. Sciences, 1907, vol. 1, p. 583.)

Exciting Causes. The exciting causes may conveniently be divided into acute psychic insults and chronic mental stresses.

Acute Psychic Insults.—Traumatic hysteria should be considered the result of the acute mental shock of an accident and not the physical effect of traumatism. For instance, even though hysteric paralysis should appear in a limb immediately after it has been injured, experimentally it can be proven that the paralysis is entirely psychic in nature, and, therefore, under certain conditions the affected part can be used in a manner that does not differ from the normal. Indeed, if such were not the case the paralysis would not be symptomatic of hysteria.

Consequently, the direct physical effects of the injury are not instrumental either in producing or in maintaining the condition.

Even though not any symptoms of the disease had ever before been apparent theoretically anyone may develop a simple physical manifestation of hysteria, or even a more elaborate form of the disease, as the immediate or delayed consequence of a severe or trivial accident. In quite a few cases symptoms first appear after a surgical operation. Like the ones following traumatism these do not result from the physical effects of the operation but rather from the anxiety, actual pain, and other distressing features of what is a novel experience. Often the manifestations of these post-operative cases are elaborated from the organic symptoms for which the patients were operated, or from the transient ones occasioned by the operation, or the surgical anæsthesia. In this manner various pains, anorexia, vomiting, tympanites, urinary retention, and other symptoms may be prolonged through the agency of a complicating hysteria.

Other than those resulting from physical traumatism probably the majority of cases of acute development are due to psychic insults whose nature is more obvious. To this large class belong the ones following sudden disappointment, deaths, and illness in others, or in self. The emotional perturbations arising from

tumultuous *affaires du coeur,* or from ones which have resulted in disappointment, are prolific exciting causes of hysteria. Any relatively severe emotional shock, however, is capable of acting as an exciting cause.

Though the onset of hysteria may appear to be gradual, yet, upon investigation, it will often be found that the underlying disintegration took place suddenly, and perhaps even that it antedated by weeks or months the appearance of symptoms; this "period of incubation" having been appropriately designated the period of meditation, or of auto-suggestion. Usually, the more acute the onset the more typical and severe are the manifestations and the less complicated by neurasthenic symptoms is the resulting symptom complex. Such cases, too, are more amenable to treatment, and, after recovery has taken place, there is less tendency towards recurrence.

Chronic Mental Stresses. The many possible chronic exciting causes are inseparable from predisposing factors. They include such diverse conditions as prolonged illness, chronic organic diseases, and any kind of long continued emotional strain such as induced, for instance, by familial and marital difficulties.

The development of hysteria in those afflicted with organic disease often is most misleading to the diagnostician. It is easy to comprehend how the knowledge that one is afflicted with a severe, incurable, organic malady, together with the

mental effects of what may be distressing physical symptoms, is most conducive to the generation of a superimposed hysteria. In epilepsy, for instance, how frequent is the interposition of typical epileptiform seizures of hysteric origin! Many, too, are the cases of multiple sclerosis which are complicated by hysteria.

Toxæmia. In harmony with the theory that brain cells secrete thought it has been contended that the psychoneuroses are directly caused by the deleterious effects upon the nerve cells of autogenic toxins. Also that ingestion of toxic substances is capable, in the same manner, of producing these conditions. Experience shows, however, that while auto-intoxication is quite common in neurasthenia and psychasthenia, it is not frequent in cases of hysteria. In view of the fact that in but few cases of the pure forms of hysteria can any evidence of toxæmia be found, another view of the mechanism of production not only is possible but is a necessity. Granted that toxins may exert a direct effect upon nerve cells, does not this act only as a predisposing factor in the majority of cases apparently due to toxæmia? It is easy to conceive of a heightened susceptibility to hysteria as a result of the state of mental depression caused by a chronic auto-intoxication. It is too much to expect any one to feel well whose head aches and who experiences vertigo and other unpleasant symptoms as consequences of toxæmia from

gastro-intestinal disturbance. The state of mental depression resulting from a condition of chronic intoxication only decreases cerebral inhibition so that in the presence of an adequate exciting cause hysteria can develop more readily than otherwise.

A common error is to ascribe to the etiology of hysteria the not uncommon autotoxis due to gastro-intestinal derangements which, in reality, are secondary effects of hysteria and not the cause of the disease. One has only to remember the effects of emotional states upon digestion, as shown by Pawlow, Cannon, and others, to understand how auto-intoxications can occur as complications of hysteria.

As an exciting cause of hysteria the mechanism of toxæmia might be compared with the mode of production by drugs of hallucinations and delusions. No one knows just how or why a drug or a toxin acts upon the brain, but we do know of the extreme variations in the cerebral effects of these substances. We have good reason to suspect that the delusions and hallucinations that may occur during certain drug intoxications are produced reflexly, and, therefore, that they are secondary to the effect of the drug upon cerebral inhibition. As such they are completely the analogues of the delusions and hallucinations of dreams.

Let us say that a drug does not directly cause a delusion but that it merely diminishes cerebral

inhibition, and thus permits lower forms of reflex cerebration whose nature is largely dependent upon the character of the coenesthetic impressions and of the chance external stimuli which are perceived at the time. Furthermore, such mental activity necessarily must be based upon the character of previous environment and education.

An intoxicated man reacts to his environment in a manner that is more or less completely devoid of the control of cerebral inhibition. Consequently, his actions are better standards of his true character than are those when he is sober —when he has assumed his mask. One cannot reasonably assert that alcohol so acts upon the brain cells that an intoxicated person is rendered pugnacious, or boisterous; it is more probable that these manifestations are revelations of the individual's real character undisguised by cerebral inhibition.

After taking opium a commonplace man might experience sleep, which, as far as he was afterwards aware, was dreamless, while a brilliant thinker like De Quincy or Coleridge would undergo, with or without the production of sleep, the most exhilarating and lucid forms of intellectual activity. Or, quite commonly the administration to a nervous patient of certain hypnotics not only may be devoid of any tendency to produce either dreams or sleep, but it may lead to aggravation of the symptoms for which it was given and to the production of new ones.

The theory advanced by Obersteiner and Pryor that sleep results from the accumulation of toxic matter is analogous to the theory that hysteria is the outcome of a similar condition. As the result of his experimental study of sleep Sidis concludes that the state "is not a disease, it is not, as the chemical speculators would have it, a kind of narcosis of the system by the poisons of fatigue products" but that it is "an actively induced passive state in relation to the external environment." (Jour. of Abnormal Psychology, vol. 3, p. 189.) Biologically interpreting sleep as an instinctive reaction of defense, Claparède avers that we sleep not because we are intoxicated or tired, but in order not to be so. (Archives de Psychologie, Feb. and Mar., 1904.)

The strongest argument against the hypothesis that in consequence of the direct effects of the toxins upon the structure of the nerve cells toxæmia is a cause of hysteria is the fact that many cases occur suddenly after accidents and in the absence of toxæmia, and also that practically every symptom of the disease can be duplicated so veritably by hypnotic suggestion as to deceive an expert. Naturally the whole subject revolves around the ancient and ubiquitous problem of the relation between brain and mind; the time honored question of monism and dualism.

Psychic Contagion. Not only is psychic contagion important as a predisposing cause but its significance in the actual production

of hysteria cannot be emphasized too greatly. The influence of psychic contagion is particularly noticeable in children on account of their normally great susceptibility to suggestion; the suggestibility which is the cause of their inherent tendency to imitate, and which enables them to acquire knowledge easily by reason of the ready acceptance, to which it leads, of any statement made by one in whom they have confidence.

Quite commonly, indeed, children are encountered who present accidents of hysteria identical in character with those of their parents. I can recall a typically hysteric woman who had psycholeptic attacks simulating focal elipepsy whose child, after witnessing a number of these seizures and hearing his mother describe the symptoms of which she was conscious, developed similar crises. Even the aura and the march of the symptoms were duplicated. In fact, the crises of more than 25% of cases of psycholepsy can be traced directly to similar attacks which the patients have observed in others. In another instance all the children of a large family possessed gastric symptoms like those of their father's "gastric neurosis" in addition to cardiac symptoms that they had acquired by psychic contagion from observing their mother's heart attacks.

Among school-children, in hospital wards, and in dispensary clinics, the effects of psychic con-

tagion are frequently encountered. Particularly is this true of large clinics where many cases of psychoneurosis have the opportunity to compare symptoms, to observe the physical disabilities of those afflicted with organic nervous diseases, and to hear lectures concerning neurologic subjects. One patient who had been treated for epilepsy heard a description of the procursive variety of epileptic attack during a clinic of which he was the subject. In less than a week procursive seizures developed like those whose descriptions he had heard. This led to question of the diagnosis, and, after close study, it was found that his seizures were hysteric in origin.

Another patient who was supposed to be an epileptic, though there was good reason for regarding his attacks as being symptomatic of hysteria, acquired a lot of new symptoms of which he made complaint during the first visit after having been examined by students in a clinic. All of these new conditions were ones whose presence had been sought, and their genesis was due to the suggestive manner in which inexperienced students had conducted their tests. Even the most carefully conducted examinations, however, may be followed by psychogenetic symptoms. Recognizing this fact Gowers stated that: "Medical inquiries and examinations often suggest to patients the definite ideas of symptoms, and the physician's knowledge of the natural association of symptoms may thus

lead to their consistent grouping in a mimetic malady, even when there is not, and still more when there is deliberate simulation." (A Manual of Diseases of the Nervous System, p. 989, 1903.)

In addition to abnormally great hetero-suggestibility psychic contagion resulting from pathologic auto-suggestibility—expectant attention—naturally has interfered greatly with the proper interpretation of the incidence of certain symptoms, and has been the sole cause of the apparent verification of many otherwise baseless theories of the disease.

The dabbling with spiritualism of the less intelligent is an especially pernicious factor both in predisposing to hysteria and in producing the disease. For obvious reasons it is usually the credulous, emotional, imaginative, and highly suggestible person who attends seances and who believes in the supposed evidences of spirit control which he witnesses, and as there are many manifestations of hysteria among these phenomena he is fortunate if he does not acquire some by psychic contagion.

More harmful are attempts to become mediumistic. When an individual deliberately seeks and encourages the development of self-induced, organized, mental dissociations, such as those required by trance states, automatic writing, etc., he is but creating and evolving a tendency that subsequently may escape his con-

trol and become the foundation of actual hysteria. Even the successful self-induction of these conditions might be considered with good reason proof of hysteria.

Because spiritualistic enthusiasts have witnessed so many diverse manifestations of hysteria, and because quite commonly they are well posted in a spurious form of psychology, or rather abnormal psychology, if hysteria develops there is at hand a wealth of knowledge of pathologic symptoms upon which autosuggestion can operate in the production of a most completely developed type of hysteria; one in which the disease is expressed less physically than as a psychosis. By reason, too, of their pseudo-knowledge of transcendental psychology, philosophy, and metaphysics, spiritualists and Christian Scientists are most resistant to psychotherapy, and their very knowledge prevents the successful application of other forms of treatment.

Epidemic Hysteria. When widespread, psychic contagion may cause veritable epidemics of what is regarded by some as hysteria, and by others as hypnotism. Frequently this occurred in the Middle Ages, and even at present the tendency has not entirely disappeared. A wave of epidemic religious hysteria has been known to sweep over an entire race and to continue until interest either died out naturally or until it was directed to some other object.

The ghost-dance religion of our own Indians is an excellent example of an epidemic of psychic contagion in a partially civilized people. This epidemic is particularly interesting in that it has been reported so carefully by James Mooney. (Fourteenth Annual Report of the Bureau of Ethnology, Smithsonian Institute, Part 2, 1892-93.) Incidentally, the manifestations of epidemic hysteria among savages are often identical with those which have occurred during many similar epidemics among highly civilized people.

Epidemics of hysteria have usually assumed a religious character because of belief in the supernatural entertained by those who were affected. Through lack of intelligent apprehension certain accidental phenomena may be ascribed to supernatural agencies with the result that abject fear, together with the increased suggestibility characteristic of mobs, leads to the birth of an epidemic. Those who are most liable to become subject to these influences are the credulous, the superstitious, and the impressionable; ones who are incapable of thinking for themselves and who are dependent upon others for guidance. In modern times epidemics of hysteria have usually assumed the form of revivals, and have occurred mainly among the impressionistic and highly superstitious negroes and Indians. The best example of a comparatively recent epi-

demic among intelligent people was the deplorable New England witchcraft episode.

When hysteria becomes epidemic it cannot be considered other than an acute transitory form that reveals the inherent potentiality of the disease in all people. Not infrequently epidemics occurred in convents, and as in these instances the number of those exposed was limited, the ubiquity of the potentiality is revealed more fully. In such epidemics not a few, but the majority, if not all, of the inmates were affected. The effect of repression of the sexual instinct was a conspicuous feature of epidemics involving the occupants of convents; the disease being expressed mainly by what was termed demoniac possession of which a frequent symptom was delusions of sexual intercourse with evil spirits. Since the exposition of Freud's theories of hysteria the significance of this fact can be grasped more intelligently.

Man tends to explain to the best of his ability phenomena of whose nature he is ignorant. If he believes in demons, and if he has no other more plausible explanation, he accounts for certain unusual incidents by assuming that they result from diabolic agencies. If such views of an individual receive popular acceptance, or if they are prevalent ones of the age, an epidemic of demonophobia may be the outcome. In the study of vampirism, demonophobia,

witchcraft, and the like, we have to deal actually with two interdependent epidemics; one of abject fear of the possessed, and the other of suggested evidences of possession.

For about 200 years the whole of Europe was a vast charnel house owing to the countless numbers of the supposedly possessed who were put to death by many almost inconceivable forms of torture. The discovery of an anæsthetic spot was sufficient evidence to condemn an individual, and very lucrative became the profession of detecting these unfortunates. The examiners went around searching for anæsthetic areas in those who were suspected, and just as physicians seek for a certain kind of anæsthesia and by their examination alone create this product of suggestibility, so, too, did the witch hunters seek and create "evidences" of possession. Consequently, unnumbered thousands of men, women, and children owed the loss of their lives to the effects of suggestion and to the ignorance of the age in which they lived. The history of such epidemics, including our own small one of witchcraft, besides being of scientific interest scarcely can be other than conducive to reflections upon the injustice and barbarities which hysterics have received.

Even though epidemic hysteria be regarded merely as an acute and transitory form of the disease its symptoms, nevertheless, are just as

severe as those observed in the most completely developed cases of endemic hysteria occurring upon a decided foundation of psychopathic heredity. Epileptiform convulsions, various rhythmical movements, hallucinations, delusions, and trance phenomena, are the most common of the severe manifestations which are prone to occur during epidemics. For instance, in describing the revivals among Southern negroes, Davenport writes: "At many of the 'big quarterlies' and the 'protracted meetin's' which are held in the South, there are scenes of frenzy, of human passion, of collapse, of catalepsy, of foaming at the mouth, of convulsion, of total loss of inhibition, compared with the scorching heat of which the Indian ghost-dance seems at times only a pale moon." (Primitive Traits in Religious Revivals, 1906.) During the revivals among the whites of Kentucky, in 1800, among other manifestations such as visions and trances the same author describes the "barking exercise:" "The votaries of this dignified rite gathered in groups, on all fours, like dogs, growling and snapping the teeth at the foot of a tree as the minister preached,—a practice which they designated as 'treeing the devil!' "

Belief in the doctrines expounded during pathologic revivals is not essential to contagion; in spite of the greatest efforts to withstand them the manifestations might appear. Thus the Rev. Myron Eells spoke of the Indian

Shaker religion: "It seems to be as catching, to use the expression of the Indians, as the measles. Many who at first ridiculed it and fought against it, and invoked the aid of the agent to stop it, were drawn into it after a little, and then they became its strongest upholders." (Fourteenth Annual Report of the Bureau of Ethnology, Smithsonian Inst., p. 748.) A typical instance is quoted by Sidis: "A gentleman and a lady of some note in the fashionable world were attracted to the camp meeting at Cone Ridge. They indulged in many contemptuous remarks on their way about the poor infatuated creatures who rolled over screaming in the mud, and promised jestingly to stand by and assist each other in case that either should be seized with the convulsions. They had not been long looking upon the strange scene before them, when the young woman lost her consciousness and fell to the ground. Her companion, forgetting his promise of protection, instantly forsook her and ran off at the top of his speed. But flight afforded him no safety. Before he had gone 200 yards he, too, fell down in convulsions." (Psychology of Suggestion, p. 352, 1899.)

Epidemic hysteria reflects the ignorance of a people. In fact, it is the direct outcome of their state of unenlightenment and its manifestations are the expression of their convictions. Indeed, one would be safe in affirming

that among the intelligent of present, or of future ages, epidemics of demonophobia and the like could not be repeated. The history of recent times shows that the epidemics of demoniac possession of the Middle Ages have been replaced by epidemics of religious revivals, of popular spiritualism, of financial bubbles, etc.

CHAPTER III

Disturbances of Sensory Perception

IN the minds of the laity paralysis must be accompanied necessarily by numbness; paralysis implying that the affected member must "feel numb and dead." In most individuals this prevalent idea probably results from the temporary paralysis and numbness that most of us have experienced after having slept with the head pillowed on the arm. Hypnotic experiments conducted upon normal persons commonly demonstrate the existence of this erroneous conception; one that is based upon valid premises drawn from personal experience. If the suggestion is made to a hypnotized subject that one arm is paralyzed, then comparative tests of the sensibility of both arms will reveal almost invariably the presence of anæsthesia in the paralyzed one. This result is obtained even when the experimenter has been most careful to eliminate the possibility of creating the anæsthesia by unintentional suggestion in his method of making the tests. As a consequence, then, of the conception that numbness is a symptom of paralysis, a hysteric person who develops paralysis, either organic or functional, is apt to have an associated numbness, or anæsthesia, of the affected member.

Among other similar cases Bernheim writes of a painter who, becoming the victim of saturnism, presented wrist-drop associated with analgesia of the dorsal aspect of the wrist and hand; the palmar surface and the fingers not being involved. The analgesia having been readily dispelled by means of suggestion, Bernheim remarks that according to the patient's idea it was the dorsal surface of the hand and wrist which seemed to be the seat of trouble; it was there that his imagination localized the motor paralysis; it was there, also, that logically he created a sensory paralysis. Being able to flex and to extend the fingers, these, in the patient's mind, were not paralyzed, and, therefore, not anæsthetic. (Conception du Mot Hysterie, 1904, p. 11.)

Independently of paralysis anæsthesia may be evolved in a number of ways. Thus, the transitory numbness following minor traumatism to sensory nerves may become fixed as a psychic anæsthesia through the instrumentality of autosuggestion. In the same manner the symptom may develop on the basis of a limb "going to sleep," or from the numbness that is noticed after an extremity has been held in a constrained position for a considerable length of time.

It is not unusual for hemianæsthesia to appear in patients who have a fear of apoplexy, due, perhaps, to the occurrence of this condi-

tion in some relative or friend. Constantly expecting to become hemiplegic, and believing that hemianæsthesia is a symptom, or even a forerunner, of the condition, patients may develop hysteric hemianæsthesia either with or without paralysis.

Often it has been noticed, even in persons who were not considered to be subject to hysteria, that a hand engaged in automatic writing became anæsthetic at the time. The explanation of this event is not difficult. In order that automatic writing can occur there must be coexistent dissociation of consciousness with elimination of the automatically functionating extremity from the field of consciousness. Not only are the motor functions dissociated but, commonly, the member as a whole is elided from consciousness with the result that sensory impressions originating in the part are not consciously perceived.

When produced by any of these means, or by similar ones, anæsthesia may be said to be autogenous. Now, if a certain kind of anæsthesia be considered a typical symptom of hysteria, and if it is diligently sought by examining physicians, both because of its interesting features and on account of its supposed diagnostic import, then the condition intentionally or unintentionally may be created in the patient through the agency of the abnormally increased suggestibility that is characteristic of the dis-

ease. Thus, anæsthesia, and other symptoms, may be heterogenous.

Parenthetically, the distinction between autosuggestion and hetorosuggestion is only one of convenience in that these two terms superficially indicate, or appear to indicate, the source of the suggestion; the mechanism of production of symptoms by either form of suggestion being the same. When, by reason of a faulty technique, the examining physician unconsciously creates anæsthesia in a patient, or when the condition is deliberately suggested upon a hypnotized subject, it is produced only because the individual accepts and acts upon the implied or the evident suggestion that has been conveyed to him. The anæsthesias which have not originated from medical examinations usually follow some injury which has produced temporary numbness of the part, and the symptom thus *suggested* is fixed as a psychic anæsthesia. In the ultimate analysis all effects of suggestion, whether apparently due to autosuggestion or to heterosuggestion, are in reality examples of autosuggestion which has been provoked by an external stimulus, immediate or remote.

That hysteric anæsthesia is almost invariably the product of a faulty technique of examination can easily be demonstrated clinically. If, for example, in ten consecutive cases whose tactile sensibility is being tested for the first

time, the patient is told to close her eyes and immediately to say "now" *when* any part of her body is touched, anæsthesia probably will not be found in any, unless, perhaps, and this is unusual, autogenous anæsthesia had already existed. On the other hand, if, in a similar number of cases, the patient is told to close her eyes and say "now" *if* she is able to feel herself touched, anæsthesia will be discovered —created—somewhere in over a quarter of the cases, providing that the usual unnecessarily prolonged and careful examination be made.

As commonly conducted the tests contain even a greater element of suggestion. Perhaps the physician states in advance that he intends to examine in order to ascertain if she has lost the feeling of any part of her body, or in some other way unintentionally conveys the impression that anæsthesia is expected; that it is a symptom which she should possess. A state of expectant attention having been excited by these suggestive remarks the examiner proceeds to stimulate various areas while asking if the patient feels "this," or if she can feel "that." Except direct hypnotic suggestion no better means could be employed intentionally to create anæsthesia.

The more prolonged and thorough the examination of sensibility the more frequently anæsthesia will be found and, if the tests are repeated during subsequent visits, it will be

fortunate, indeed, if one out of ten cases escapes the production of this "symptom." It is the avoidance, now, of such faulty methods of examination that has caused hemianæsthesia to become so rare in the practice of many of the French neurologists when formerly it was a common symptom.

These facts alone show that the experimental study of hysteria is largely the study of its symptomatic increased suggestibility, and that those who devote their time to the investigation of such manifestations as anæsthesia for the most part are really not dealing with essential symptoms of the disease but with the reactions of the patient to suggestion.

As the confirmed hysteric is inclined to wander from one physician, or clinic, to another, the examinations of the first few physicians commonly are quite sufficient both to create and to render more or less permanent certain "stigmata." Those who have subsequently to deal with these old and repeatedly examined cases naturally do not cause by their own examinations the production of these symptoms, and, no matter how careful their technique, anæsthesia and the like will probably be found for the reason that they had already existed.

In the case of Lizzie B., a patient who had been examined by another physician without any sensory deficit having been noted, the conscious perception of tactile stimuli had become imper-

fect and much delayed. After having been asked to state which side had been touched, the stimuli were referred to the corresponding point on the contralateral member—allocheiria. On repeating these tests, after a short rest, she was unable consciously to perceive any of the stimuli. Thus, hysteric anæsthesia was created by the examination. Now, by telling her that there really was nothing wrong with her sensibility, that she could feel, that she would signify her perception of each stimulus by saying "now" *just as soon as she felt it*, and each time that she would state exactly where she had been touched, both anæsthesia and allocheiria were caused to disappear. These conditions did not return so long as she was under observation—over a year.

As typical of the modern reaction from the extreme views of anæsthesia held by the older observers is Babinski's total disregard of the infrequent autogenous anæsthesia by his sweeping assertion that anæsthesia is always the result of suggestion during medical examinations conducted with a faulty technique. In support of his contention he states that during ten years he had not encountered hemianæsthesia among hysteric patients who had not been previously examined by others. In 1910 Bernheim, too, asserted that since 1900 he has failed to discover hemianæsthesia in patients examined for the first time. In order to explain the absence of the condition in his service he states: "To-day I

explore with the idea that it does not exist; and this idea suffices to modify my technique of examination, and to eliminate its suggestive character." (Hypnotisme et Suggestion, Hystérie, Psychoneuroses, etc., 1910, p. 269.)

Now there must be some way of reconciling such statements with the fact that other observers found anæsthesia in from 75 to 95%, and hemianæsthesia in 30 to 50% of their hysteric patients. The only plausible explanation for such conflicting results is that while formerly physicians created anæsthesias by reason of their faulty methods of examination, now, on the contrary, Bernheim, Babinski, and others have perfected their technique of examination to such a degree that no longer do they suggest the conditions upon the patient.

But how account for the absence of autogenous anæsthesia and hemianæsthesia in the practice of these physicians? If it suffices to produce anæsthesia merely when the physician expects to find sensory deficits and examines his hysteric patients in accordance with his views, surely when one explores, as Bernheim does, with the idea that the condition does not exist, autogenous anæsthesia, if present, will disappear in consequence of the fact that his method of testing expresses his convictions. In the first instance the suggestive character of the examination is pathogenic; in the second one it is therapeutic. That such an explanation is not improbable is indi-

cated by the fact that through the agency of intentional suggestion it is just as easy to cause anæsthesia to disappear as it is to create the condition.

If anæsthesia were not usually of medical origin certainly the statements of Bernheim and Babinski would be remarkable in view of the fact that, until recently, this condition was one of the most frequent of the supposed symptoms of hysteria; so frequent, in fact, that it was considered stigmatic of the disease.

It is such facts as these that lead one to question all theories of the disease, for no matter how well supported by facts they may seem to be, and no matter how general their acceptance, the history of the malady renders only too evident the effects of suggestion and of psychic contagion in the elaboration of innumerable hypotheses which afterwards were proven to be erroneous.

Less radical are Janet's views concerning the significance of anæsthesia. To express the difficulty in interpreting the psychologic character of hysteric anæsthesia he writes: "Now, your examination alone will suffice to cause a real anæsthesia to disappear; now—and this is more serious—your manner of interrogating will create outright an anæsthesia that did not exist. The study of the stigmata is made on no patients so well as on old ones; real pillars of the hospital, who have already been examined

thousands of times. When you have to deal with new patients, who have not yet been touched, you recognize with astonishment that anæsthesia is rarer, less important than Charcot said. On this point I apologize myself, and acknowledge that, under the influence of la Salpêtrière, I formerly attributed more importance to anæsthesia than I would do now.'' (Major Symptoms of Hysteria 1907, p. 274.)

In an earlier work we find the following significant statement pertaining to hysteria in the young: ''The patients, in the beginning, have no anæsthesia; this has been observed by all authors.'' (Mental State of Hystericals, 1892, Corson trans. 1901, p. 47.) Why do not young hysterics present anæsthesia? Being young these patients have not yet been examined by numerous physicians and thus heterogenous anæsthesia is less apt to have been created, and because of their age they are not apt to possess knowledge of such a condition as anæsthesia so that it is not liable to develop as an autogenous symptom.

In connection with anæsthesia it was formerly noticed with astonishment that what should be a distressing symptom almost never was made the subject of complaint. Or, that the majority of patients were not aware of their sensory deficit until this was revealed by an examination. The patient might exclaim: ''Why, I never knew that I couldn't feel in

that arm!'' The majority, however, expressed neither surprise nor concern when the physician spoke of anæsthesia which he had found and whose existence previously had been unknown.

By means of the argument that hysteric anæsthesia is only subjective and that as such the patient really perceives tactile and other stimuli but that the perceptions are not synthetized with consciousness, exception might be taken to the view that this symptom is commonly produced only by suggestive examinations. Though quite true as an explanation of the inocuous nature of existing anæsthesia logically it does not seem legitimate to conclude that *all* anæsthesias antedate the examination during which they are discovered both by physician and by patient. Practically, the weight of evidence is overwhelmingly against such reasoning.

In their conceptions of diseases of different parts of the body laymen think in popular terms of arms, legs, halves of the body, etc., and not in scientific ones of peripheral sensory distribution. Naturally, then, hysteric anæsthesia, being entirely psychic in origin, does not conform with the anatomical peculiarities of sensory distribution. The one conceivable exception to this rule is the possible occurrence of psychogenetic anæsthesia limited to the distribution of a sensory nerve as a result of the

fixation of transitory numbness provoked by slight traumatism to that nerve. The attention of the patient having been directed to the symptom and to that particular distribution unconscious autosuggestion amplifies and fixes the primarily organic symptom.

In view of its anatomical inconsistency any anæsthesia is suggestive of hysteria when it is limited precisely to one lateral half of the body, when it surrounds an arm or a leg like a glove, a coat sleeve, a stocking, etc., or when it occurs in irregular disseminated patches. Total hysteric anæsthesia is most exceptional.

The borders of organic anæsthesia are fixed, or varying but gradually, and they are not well defined because of the overlapping that exists in the distribution of the various nerves. Those of hysteria, however, are sharply delineated and varying much from one examination to another, and even during the same examination. In fact, their borders can be determined at will according to the use of suggestion by the examiner.

The following instance, mentioned by Prince, shows how readily the hysteric is influenced by the conceptions of her physician, and, therefore, how one is apt to discover, or unintentionally to create, whatever one expects to find: "In one instance the examining physician, thinking the limiting line should be two inches from the median line on the anæsthetic side, demonstrated

this boundary, but when erroneously told it should be on the opposite side, corrected, as he thought, his faulty observation and demonstrated the line in the new situation.'' (Amer. System of Pract. Med., p. 643.)

Hysteric anæsthesia does not occasion loss of the reflexes except, perhaps, those of the skin, and, during sleep, stimulation of an anæsthetic limb not only may cause its withdrawal but even verbal remonstrances may be provoked. Also, it has been noticed that hysteric anæsthesia may disappear during the exhilaration caused by drugs. Finally, there need not be any impairment in the use of the affected member; with her eyes closed the patient being able to write, for instance, even though unable consciously to feel the pencil she grasps.

Quantitatively, hysteric anæsthesia may be complete or incomplete; conscious perception either being absent or only impaired. Not only the skin but the mucous membranes, or both, may be involved. Qualitatively, any one or all of the various kinds of sensory perception are capable of being the subject of disturbances similar to those of tactual perception. In hysteria, as well as during hypnosis in a normal person, it has been noticed that small wounds in an anæsthetic region are not apt to produce hæmorrhage or, in fact, even that hæmorrhage may not appear at all, and that perspiration may be lessened in the same region.

Let us examine some patients and, by means of suitable experiments, demonstrate the peculiarity of hysteric anæsthesia and attempt to determine its nature. The most easy and convincing experiments are accomplished with the aid of hypnosis. Numerous ones have been devised and with a little ingenuity anyone can contrive others suitable for the case at hand. Sometimes one will fail while, in the same patient, the application of another is attended with success. If differentiation from organic anæsthesia depends upon such tests alone, one successful result indicates that this one symptom, at least, is hysteric in origin no matter how many other experiments were failures.

Suppose we blindfold a patient who presents an old, well organized, and complete anæsthesia and then lightly touch the anæsthetic region a certain number of times. Upon being questioned the patient asserts positively that she has not felt anything. Now we hypnotize her and suggest that she tells us how many tactual impressions were perceived. Without hesitation she states the correct number. If, in a manner that is not too obvious, the experimenter suggests to the patient that she will inform him of the number of the impressions *which she perceived* in many cases a successful result will be secured without resorting to hypnosis.

In a patient with long continued hemianæsthesia occurring in association with organic

hemiplegia all forms of sensibility were lost on the affected side of the body. In consideration of the history of the patient, together with the findings of a hurried first examination, it was thought that the sensory loss was one of the consequences of a cerebral hæmorrhage. Immediately afterwards he was carefully examined before a body of students. Even in this patient, one familiar with many clinics and with neurologic examinations, it was possible, during this second examination, to carry out successfully the above procedures without resorting to hypnosis. Disregarding other facts and excluding a number of peculiarities which were inconsistent with organic hemianæsthesia, the results of these tests alone would have been sufficient to prove that the hemianæsthesia, at least, was hysteric in nature. The sensory deficit was too general and too absolute; he appeared to exhibit absolute loss of every form of sensibility that was tested. Thus he asserted that he could not feel tactual, painful and thermal impressions and that osseous sensibility to the tuning fork was absent. Even though several pounds of pressure was exerted, sufficient to push his leg along the floor, he said that he felt nothing. When the affected limbs were placed in various positions and he was told to retain these passively assumed attitudes he did so without other support than his own efforts. He was unable, however, to duplicate

these postures with the members of the other side because as he asserted, he did not know where the paralyzed ones were located. Besides the experiments that demonstrated positively his perception of various kinds of stimuli the anomalous character of his sensory losses was sufficient to reveal their psychic nature.

During examination of tactile sensibility it is frequently noticed that the patient starts slightly whenever the anæsthetic region is stimulated, yet consciously she does not perceive the impressions.

By training the patient to carry out some simple act each time a normal area of the skin is stimulated it is often possible to obtain the same response when an anæsthetic region is stimulated in the same manner. Janet has succeeded in causing the patient to say "yes" when a normal area of the skin was touched, the patient's eyes being shielded, and "no" when an anæsthetic area likewise was stimulated. This curious result was obtained by telling the patient in advance that she was to answer affirmatively when the tactile impression was perceived, and negatively when it was not felt. After these instructions the physician must proceed rapidly with his tests in order not to give the patient time to think about the inconsistency of the replies. Naturally, too, if she is intelligent enough to remark this inconsistency not only will the procedure fail but

the physician exposes himself to censure for implying that she was malingering.

The same author speaks of a patient with hysteric total anæsthesia upon whom electricity was being employed for therapeutic purposes. One day it was noticed that on each application of the electrode strong muscular contractions appeared as usual, although by accident the electrodes had been disconnected, and, furthermore, the patient could not see when the applications were made. Here, then, through unconscious autosuggestion, there occurred motor reaction to a supposed application of electricity even though by reason of her anæsthesia the patient consciously could not perceive the application of the electrode. (Janet: op. cit., p. 27.)

In order to demonstrate the doubling of consciousness in hysteria Alfred Binet adduced some interesting experiments upon patients with complete anæsthesia of an upper extremity. He pricks the hand a certain number of times and then asks the patient what number comes into his mind. Often the patient gives the same number as that of the pricks he was unable to feel. To vary the experiment some object may be placed in the anæsthetic hand and then the patient asked to name the thing of which he is thinking. Having screened the hand Binet passively flexes and extends one of the fingers a number of times. Fre-

quently he finds that the movements automatically continue a few times after he ceases imparting the passive motion. In order to continue the actions of flexion and extension the patient must have perceived the sensory impressions—muscular and articular—produced by the passive movements. Subconscious perception and recognition accounts, too, for the fingers grasping in the correct manner such objects as scissors or a pen which are placed in the anæsthetic hand. By means of guiding the screened movements of the pen the same author causes the hand to write a familiar name. In doing so the name intentionally is misspelled. Now, having started the hand to rewrite the name the writing is automatically completed, but often the mistake is corrected. This experiment shows that not only did there occur subconscious perception of the primarily passive movements but that some kind of intelligence which was apart from the consciousness of the patient recognized and corrected a mistake in orthography. Finally, becoming accustomed to automatic writing the patient writes a word which has been traced upon the back of his anæsthetic hand. (On Double Consciousness, 1905.)

By proving that, in spite of what appears to be complete anæsthesia, patients *do* perceive impressions arising in the affected region the term anæsthesia—without feeling—is shown to be a

misnomer. Then, are all patients with hysteric anæsthesia nothing but malingerers? Successfully to simulate a condition with such peculiar qualities would necessitate that the individual be exceedingly clever and stoical enough to withstand pain without a murmur. However, no person who is simulating with a definite object in view would expose his malingering by reacting to experiments in the manner which has just been described.

Might not a woman simulate anæsthesia solely in order to provoke attention? If anyone should simulate the symptom with no other apparent object than to excite interest the condition could not be considered malingering in the sense that this term is commonly employed, but the reason for the simulation alone would be indicative of one of the mental peculiarities of hysteria.

It is safe to look upon hysteria as the only condition—except insanity—in which an adult might simulate for the purpose of arousing sympathy. But, simulation of anæsthesia by a hysteric is rare, and enough has been written already to show that hysteric disturbances of sensory perception are symptoms over which the patient has not any control, originating, as they do, in dissociation of consciousness.

The curious qualities of hysteric anæsthesia can be interpreted in only one way. It is only a psychologic explanation which is adequately capable of accounting for the fact that a patient

is unaware of a perception whose existence can be demonstrated. Hysteric anæsthesia, and other similar disturbances of perception, can be made intelligible by assuming that while sensory impressions really are perceived there is lack of synthesis of the percepts with consciousness. In other words, there is deficiency of personal perception, or, less technically to express the condition, hysteric anæsthesia, as indicated by Lasègue in 1864, is but a result of pathologic exaggeration of normal absent-mindedness, personal examples of which each of us can readily recall. It is, then, only the exaggeration of the normal peculiarity of the human mind which permits one to search for the hat which is upon his head, or which is accountable for the fact that soldiers who have been wounded often continue to fight without feeling any pain, and, in fact, even ignorant of the wounds which they have sustained.

Hysteric anæsthesia might be compared, also, with the field of attention in the act of vision. One whose attention is concentrated on an object in any portion of the visual field may not consciously perceive objects in any other portion of the field, yet experimentally it has been demonstrated that under these conditions there has actually occurred subconscious perception of visual impressions in the field peripheral to the fixation point of attention.

According to Janet, hysteria is characterized by retraction of the field of consciousness with the consequence that the patient is unable to attend to the many impressions which are constantly being conveyed to the brain from different parts of the body. Certain perceptions, therefore, are ignored, and this primarily voluntary suppression of perceptions, becoming habitual, results in the production of anæsthesia, amaurosis, etc.

Freud looks upon anæsthesia and other symptoms as symbolic representations of former experiences which have been forgotten—suppressed—because of their unpleasant nature. This explanation of the absence of personal perception is not, however, universally applicable. It does not explain, for instance, why anæsthesia may appear after traumatism of which the patient has a most vivid recollection. It is eminently practicable in those cases in which the disease has developed after more obvious psychic insults whose memories really have been suppressed from consciousness.

Although hysteric anæsthesia does not usually cause any disturbance of the motor functions of the affected part there may occur occasionally, in a profoundly anæsthetic member, an associated motor disability that is present only when the patient's eyes are closed, or when they are directed away from the part. This pseudo-paralysis, known as Lasègue's syndrome, is appar-

ent only during attempts to perform consciously some movement; automatic and lower reflex acts not being impaired. When a part is the seat of total hysteric anæsthesia it is non-existent to the patient unless she can see it, or feel it with some other member, and this alone is quite sufficient to account for the condition. Such an explanation is supported by the fact that these patients are able, with the assistance of visual imagination or of tactile impressions, to carry out a movement, and, furthermore, subconscious movements are not affected. Unless originating as a psychologic artefact—a product of too careful study or of unconscious suggestion during medical examinations—it would seem that the development of Lasègue's syndrome is, to say the least, most improbable.

The mental processes of sensory perception have been divided by Ernest Jones into two groups; the first of which comprises those processes dependent upon esthesic impulses, and the second group, designated auto-somatognostic, embraces the memory feelings of different parts of the body. It is by reason of the normal activity of memories of feelings that have been experienced in the past that enables one to recognize not only that a sensory percept results from a stimulus applied to a certain part of the body, but also to know which side had been stimulated. And it is by association with these memories that a sensory percept is experienced

with the warmth that implies personal perception. Now, according to the same author, if the esthesic sensibilities—tactile, pain, coenesthetic, etc.—return first, during recovery from hysteric anæsthesia, there results impairment of personal perception so that the patient describes a tactual perception as having been induced by a sensory impression in a part that does not belong to his body, or the perception is referred to a corresponding point on the contralateral member whose sensibility is normal. As an instance of the former Jones writes of a patient who said: "You are touching the back of some fore-finger with a blunt pin; it isn't my finger and I have no idea where it is, but it causes an intensely disagreeable shudder to run all up one side of me."

Dyschiria, or difficulty in naming the side of the body from which a sensory impression has been perceived, is due to loss of the "chirognostic" sense—the feeling of sidedness. Sensory dyschiria is divided by the same author into achiria when the patient cannot recognize which side of the body has been stimulated, though the sensory impression was perceived, allochiria when the stimulus is referred to a corresponding point on the opposite side of the body, and synchiria when a stimulus simultaneously arouses the feeling of a sensation at corresponding points of each side of the body. (The Precise Diagnostic Value of Allochiria, Brain, 1907, p.

490. The Significance of Phrictopathic Sensation, Jour. of Nerv. and Ment. Dis., 1908, p. 427. The Dyschiric Syndrome, Jour. of Abn. Psych., vol. 4, p. 311, etc.)

Like Lasègue's syndrome, it is probable that most of the instances of dyschiria were the product of examinations during which this condition was sought. When by reason of the suggestive technique of the examination patients are permitted to grasp the idea that it is possible for a stimulus to be incorrectly localized allochiria and other defects in tactual orientation not infrequently are discovered. According to the usual technique the patient's hand, for instance, is stimulated and then she is asked first *if she felt anything*, then *which* hand was touched. I venture to state that these defects will never be found if, instead of such a suggestive technique, the physician casually tells the patient that after closing her eyes she will perform a certain act when her right hand is touched, and a different one when the left hand is stimulated.

In common with other manifestations anæsthesia may be transferred from side to side, modified, and even caused to disappear by means of the local application of metals, magnets, or any kind of apparatus, provided only that the patient can be induced to anticipate any of these results. These phenomena, the consequence of expectant attention on the part

of the patient and of suggestion on that of the physician, besides being additional evidence of the psychic nature of symptoms of hysteria, are mentioned in order further to indicate how readily one can misinterpret these manifestations, and how natural it is to ascribe curative virtues to drugs and to other therapeutic means whose beneficial action is due entirely to suggestion and to expectant attention.

On account of ignoring the effects of suggestion many papers and books concerning the curious and remarkable therapeutic effects of local application of metals, magnets, etc., were written during the last century. In fact, metallo-therapy and magneto-therapy were practiced as late as 1880 by many famous physicians and at many hospitals; including la Salpêtrière. Even some of the recent text-books contain descriptions of the peculiar effects of applications of metals or of magnets to anæsthetic or paralyzed members, without however, suggestion being recognized as the true cause of these modifications. It is the same principle that caused the vogue of Perkin's metallic tractors, electric belts, valerian, asafœtida, and the like. It is curious that while many physicians are quite willing to grant that suggestion is capable of producing and of modifying symptoms of hysteria yet they do not recognize the pathogenic effects of their own suggestive examinations, and they

accept with avidity new therapeutic agents whose supposed virtues, in the treatment of the disease, are dependent entirely upon suggestion.

In case hysteric anæsthesia has not existed for a long time, and provided that it has not been made the subject of much experimentation, and that sensibility is not examined repeatedly, it is usually an easy matter to cause the condition to disappear. Otherwise, it may continue indefinitely as shown by the old Salpêtrière patients; ones that have served as clinical material for a succession of authors. Before proceeding, it is advisable perhaps to state that, excluding exceptional cases in which the diagnosis is obscure, the physician is not justified in creating the "stigmata;" conditions which may persist indefinitely unless removed promptly by suggestion. Enough has been written already to point out that the only diagnostic significance they possess is the increased suggestibility which they imply.

As already mentioned, hysteric disturbances of sensibility are not confined to the tactile sense. Besides absence of conscious perception of tactile impressions there may occur similar perceptual derangements involving the pain sense—analgesia—, the temperature sense —thermo-anæsthesia—, the pressure, muscle, vibratory, and electrical senses. Being of great importance, "anæsthesia" of the special

senses will receive consideration in a separate chapter.

Excepting loss of the muscle sense—a condition whose existence is incapable of being conceived by most patients—a part which is the seat of hysteric anæsthesia is usually affected also with loss of the pain, temperature, and perhaps even other, senses. Necessarily this must be true, for patients do not possess knowledge of the anatomic and physiologic differentiation of sensibility, and, consequently, a part that is numb must be numb to all kinds of stimuli.

Rarely, involvement of the muscle sense may occur independently in cases of profound anæsthesia, but it may be found more frequently if the condition is sought, for then the attention of the patient is directed to the possibility of the occurrence of this manifestation. As compared with what should be observed in case of organic loss of muscle sense the hysteric variety presents some characteristics which, to say the least, are peculiar. Thus, the hysteric is able to maintain the position in which a limb has been passively placed while her eyes were closed, yet, as in two patients I have observed, she asserts that she does not even know where her limb is located. This would be utterly impossible if the disturbance were organic and advanced to such a degree. Then, too, the hysteric may be able, without the assistance of

vision, to move the affected extremity without any ataxia becoming apparent, even though she is unable to duplicate the position in which the contralateral and normal member has been placed. Other patients who, during an examination, present decided hysteric incoordination of the lower extremities, afterwards walk around without exhibiting ataxia.

While examining a hysteric there not infrequently develops a kind of static ataxia, but even if this be sufficient to cause her to fall, it does not seem to occasion any inconvenience, and almost invariably it can be caused to disappear if the physician impresses the patient with positive assurances of her ability successfully to stand with the eyes closed. It will be noticed, too, that the patients who present this inocuous form of ataxia are often the ones who complain of vertigo. This is significant because the vertigo serves as a basis from which, by autosuggestion, static ataxia is developed.

The conclusion to be drawn from study of the various kinds of disturbances of sensory perception that have been described is that one can not be too careful in testing for the purpose of eliminating possible organic disease, because, if the patient is a hysteric, the very conditions that are sought will be created solely by reason of unconscious suggestion, unless the technique of examination is almost perfect in its freedom from pathogenic suggestion.

Formerly, the discovery of hyperæsthetic areas in the inframammary and ovarian regions was supposed to possess considerable diagnostic significance. Clinical experience shows, however, that if pressure is made in any part of the body while asking the patient if pain is produced, areas of hyperæsthesia can be created without further suggestion in almost all cases of hysteria, and wherever one desires. On the other hand, this symptom will almost never be found if the regions supposed to be the elective seat of hyperæsthesia be pressed upon while the patient's attention is directed elsewhere, or if the pressure be made without having caused the patient to believe that pain or any other unpleasant sensation is expected.

Inasmuch as it was customary, and for obvious reasons, to regard the ovarian and the inframammary regions as the ones in which hyperæsthesia commonly existed, these were the only ones which ordinarily were subjected to examination. Consequently, hyperæsthesia in these regions was supposed to be valuable evidence in favor of the diagnosis hysteria. Now, we can interpret this "stigma" almost invariably to be the consequence of the suggestive manner in which it is sought.

When occurring independently of examinations, quite commonly hyperæsthesia results as the peripheral projection of hallucinatory pain arising from a fixed belief that has been en-

gendered—suggested—by some former accident or unpleasant experience. In some of these cases the hyperæsthesia or pain has been caused to continue long after the painful effects of the trauma, or of the disease process from which it originated, should have disappeared; the continuation being due to fixation of the symptom by expectant attention. Following an operation for appendicitis, for instance, the patient may continue to complain of pain or of hyperæsthesia around McBurney's point. If pressure be exerted in this region the perception, by association of ideas with the memory complex concerning the former appendicitis and the operation, arouses a mental representation so vivid as to cause the hallucination of pain. That the symptom is not due to adhesions or to some other cause of actual pain can be demonstrated by causing, through psychotherapeutic means, complete and permanent removal of the pain.

Synæsthesia is the name applied to that phenomenon characterized by mental representation of a perception of one kind of sensation in consequence of a stimulus to a totally different sensory system. In the subdivision of synæsthesia known as *audition colorée* the hearing of a certain name, or sound, arouses a fixed color representation. The various kinds of synæsthesia are due to associations of ideas which were usually formed in infancy. Suppose, however, by reason of the same process—association of

ideas—the sight of a knife or the word "operation" should provoke hallucinatory pain because these stimuli "touch" the repressed complex of a surgical operation: then this analogue of an instance of normal synæsthesia is pathologic because it is not compatible with the best interests of the individual.

In the absence of an organic cause for the symptom, hysteric pain may be regarded as the hallucinatory expression of a subconscious memory of pain. Prince compares hysteric pain with the power of mental representation possessed by good visualizers and auditives, who revive with the intensity of a hallucination the visual or auditory memories of past experiences. He considers hysteric pain to be a quasi-hallucination due to revival of memory images of a former and actual pain. (Amer. Syst. of Pract. Med., p. 628.)

Hyperæsthesia and pain may occur also in any hysteric patient who has a variety of symptoms which imply, to her, a disease that ordinarily is accompanied with pain or tenderness. If the pain is located in the breast and is associated with hysteric oedema it is possible to mistake the condition for tumor of the breast. Ovarian disease, coxalgia, and other organic diseases may be mimicked in the same manner. Hysteric pseudo-migrane is very common; perhaps more than half of the so-called cases of migrane in women really are hysteric

in origin, and, therefore, the condition has no other relation to true migraine than its superficial resemblance to this disease.

By reason of the psychic nature of hysteria there is not any structure in which organic pain can arise that is not capable also of being the seat of externalized pain of psychic origin. At all events there should not be any difficulty in distinguishing between organic pains and those due to hysteria.

The hysteric often smiles pleasantly while describing the severe pain with which she is afflicted and though her suffering, judging from her description, is so intense that it should prostrate her, yet it does not seem to cause any real distress. While conversing with the patient one frequently gains the impression that the emotional and physical reactions are exaggerated, and, upon resorting to a physical examination, careful search fails to reveal any physical cause for pain, or one is found which is insignificant as compared with the amount of pain of which the patient complains.

Pressure upon the alleged painful region not only may provoke an exaggerated expression of distress but it may precipitate some one of the innumerable kinds of hysteric crisis. During distraction of the patient's attention, however, the same procedure may be repeated without causing any evidence of pain whatever. The so-called hysterogenic zones can be de-

scribed more appropriately in connection with the attacks of hysteria.

Painful organic conditions of the chest and abdomen are productive of a characteristic type of disturbance of respiration; the rate usually being increased, and inspiration being superficial and repressed. Hysteric pain referred to the same regions may be accompanied by increased frequency of respiration, but, instead of being shallow and interrupted in type, inspiration is free and enormously increased in depth; especially when pressure is applied over the seat of pain. In case of abdominal pain a valuable differential sign is afforded by the fact that if we press upon that part of the abdomen which the hysteric asserts is painful, we notice the absence of the protective rigidity that is aroused by painful organic abdominal disease.

CHAPTER IV

The Disturbances of Sensory Perception—The Special Senses

VISUAL PERCEPTION. *Amaurosis*, an unusual condition, though much less uncommon than was formerly supposed to be the case, may be unilateral or bilateral, paroxysmal or constant, complete or incomplete—*amblyopia*—, and it may persist for many years or appear only as a transitory manifestation. Usually this special type of psychic anæsthesia develops in females, and the unilateral form of visual deficit is decidedly more common than bilateral amaurosis. Amblyopias are encountered much more frequently than amaurosis, and, like anæsthesia, they may be either autogenous or the result of suggestion during examination of the patient's vision.

Not a few of the reported cases of monocular amaurosis and amblyopia have occurred in association with homolateral hemianæsthesia and similar unilateral sensory derangements. The reason for this is apparent when one stops to consider that, in the minds of the laity, hemianæsthesia should include all of the senses of one lateral half of the body.

When amaurosis occurs independently of hemianæsthesia the cornea and the skin immediately

surrounding the eye may be the seat of anæsthesia. This may be explained in the same manner that we account for the anomalous borders of ordinary anæsthesia. Just as the layman thinks in popular terms of arms, forearms, and legs, so does he think of the eye as including vision, the eye ball, the eyelids, and adjacent structures; the popular use of such expressions as "closing of the eyes" being somewhat indicative of this conception. Accordingly, in association with psychic amaurosis what is more natural than the occurrence of subjective anæsthesia of the cornea, and eye lids?

The exciting cause, particularly of monocular amaurosis, often is found to be some trauma, rarely other than trivial, which the patient believed capable of producing blindness. For instance, in one of Gradle's cases hysteric monocular amaurosis followed an injury adjacent to, but not involving, the affected eye. (Jour. of the A. M. A., April 24, 1909, p. 1308.)

Like the production of other symptoms of hysteria it would appear that anything which merely concentrates the patient's attention upon the visual function is sufficiently suggestive to result in amaurosis or amblyopia. In two of my own cases amaurosis was evidently caused by procedures which had induced concentration of the patient's attention upon vision.

Miss M., aet. 23, presented typical major symptoms of hysteria. October 12, 1908, a drop of tuberculin solution was instilled into her right eye, and, to control the test, a drop of saline solution was placed in the left one. The great importance, to her, of the results of the Wolff-Eissner test led Miss M. frequently to examine her eyes; in fact, there was aroused a constant state of expectant attention centered upon her eyes and upon vision. The next day, though both eyes appeared to be normal, the patient complained of a feeling of irritation in the left one, and of homolateral impairment of vision. She was told, then, that the tuberculin had been instilled only into the right eye. Complete monocular psychic amaurosis, affecting vision with the right eye, was present when she awakened the following morning. Having had explained to her the nature of the blindness, and after positive assurances that her vision would become normal in the course of a few days, the symptom was caused to disappear promptly without necessitating recourse to other procedures.

In the case of Mabel A., a major hysteric, aet. 12, attacks of complete bilateral psychic amaurosis developed 22 days after perimetric examination and without any other probable cause being ascertainable. The prolonged and repeated examination with the perimeter, a quite sufficient cause for the production of the

symptom, so concentrated the attention of the patient upon her visual function that, following a not uncommonly extended period of meditation, or of autosuggestion, amaurosis appeared. The attacks of amaurosis, each of which lasted several hours, were caused to disappear without difficulty by means of suggestion during the hypnotic state.

The shock of being told by another physician that her fundi showed evidences either of uræmia or of tuberculosis (!) was sufficient in one patient to provoke bilateral amblyopia of high degree. After the elimination of possible organic causes for the reduction in visual acuity psychotherapy was effectual in causing speedy return of vision to normal, and, it is needless to say, ophthalmologic examination resulted in negative findings.

Another instance of an emotional cause is worthy of mention. A young lady was much agitated in anticipation of singing a solo in church. When the time arrived her vision became indistinct and the congregation seemed to disappear from view. These symptoms might appear in anyone and without further difficulty being experienced. In the case of actors with stage fright often the audience appears to be blotted out, but this systematized amaurosis is only a temporary manifestation of a reaction of defense. As stage fright is primarily due to fear of the audience suppres-

sion of the visual image of this body must be a conservative process. At all events, the young lady was subject to hysteria, and, consequently, the temporary emotional blurring of vision became elaborated into complete bilateral amaurosis. It was necessary to lead her home. and the symptom persisted for three days, when spontaneous recovery of vision occurred. Following this experience any decided excitement was sufficient to provoke a similar attack.

Recurrence of hysteric accidents is common. It seems that any emotional disturbance tends to cause repetition of former pathologic reactions providing that another kind of reaction is not casually suggested upon the patient. Moreover, transitory attacks of amaurosis are quite common; it is only the more permanent ones which are unusual.

As all the possible accidents of hysteria are potential in a given case and as each requires only an adequate exciting cause to render it actual, so in these four cases the diagnostic tests and the emotional disturbances were quite sufficient to determine the genesis of amaurosis. Naturally, a factor which is capable of acting as the exciting cause of a symptom in one hysteric individual is of negligible etiologic importance in others; the harmlessness of the factor or the induction of pathologic consequences depending entirely upon the personal equation.

One of the symptoms of hysteria is the tendency, exaggerated above the normal, towards interference with the perfect accomplishment of volitional acts, and more particularly of more or less automatic acts, when the patient's attention is directed to their performance. For this reason, during examination of visual acuity, amblyopia may often be noticed in the same manner that dyamometric examination may appear to indicate that the patient's gripping power is greatly diminished. In either case the condition is brought about by the tests and usually it disappears promptly with the conclusion of the examination. These subjective and temporary amblyopias are well known, and, in testing the visual acuity of hysteric patients, every ophthalmologist employs suggestion, whether unconsciously or intentionally, in the effort to reassure the patient and to induce her to read the letters of just one more line lower down on the test card. It is not impossible, too, that tests of visual acuity may occasion more persistent amblyopia or amaurosis just as perimetric examination of Mabel A. eventuated in the production of this symptom.

Prince has written of a patient whose peculiar kind of amblyopia may have been produced by an examination of vision. The patient had always believed that his vision was good until he was examined to determine his fitness for appointment to the Boston police force. As the

examination showed defective visual acuity, each eye being tested separately, he was rejected. Subsequently, he was examined by Dr. Putnam and Dr. Prince who found that while binocular vision was 20/15 monocular fixation reduced his vision to 17/100 with the left eye, and to 17/70 with the right one. (Hysterical Monocular Amblyopia Coexisting with Normal Binocular Vision, Amer. Jour. of the Med. Sciences, Feb. 1897).

Even a distressing sight may cause amaurosis. Great excitement normally may bring about a temporary and more or less complete inhibition of vision. In such cases the individual asserts that everything became dark, or that he acted without being able to see what he was doing. When one witnesses a distressing or revolting scene, there is a tendency to shut out the view by closing the eyes, or by clapping the hands over them. Consequently, when hysteric amaurosis develops after such an exposure, the condition seems to be but the psychic elaboration of this normal reaction of defense. And the dissociation of visual percepts from consciousness once having occurred, the symptom, in a hysteric, would tend to persist indefinitely. An excellent instance of this mode of genesis is afforded by a case which was reported by H. Gradle, who writes: "The patient, hitherto in good health, had had a severe shock to her feelings, . . . , and,

clapping her hands to her eyes to shut out the sight, found herself absolutely blind.'' The next day, suggestion, reinforced with mild faradism, caused the return of conscious perception of visual impressions. (Gradle: op. cit.).

In the more pure forms of hysteria the presence of amaurosis may not annoy the patient nor cause her to be alarmed. In fact, complete bilateral amaurosis may not cause any inconvenience in some cases, and, in spite of the visual loss, the patient may contrive to go about as usual; though exhibiting, perhaps, the uncertain actions of organic blindness. Because of its psychic nature, and in contradistinction to most varieties of organic blindness, the reflexes of the iris are unimpaired, with but few exceptions, and ophthalmologic examination fails to reveal any pathologic changes. It scarcely need be mentioned that the suddenly appearing ambloypias due to toxæmias and to exposure to intense light, may not be accompanied with fundus changes, and, therefore, these possibilities must be excluded before making a diagnosis. Of some diagnostic importance is the discovery of corneal anæsthesia and of a ring of anæsthesia surrounding the eyes.

While reading a book the attention of a normal person may become concentrated upon some extraneous idea. Subconsciously he continues to

read; but when his attention returns to the book he finds that he is ignorant of all that he had read while his attention was diverted. Now, we know that experiments performed under similar circumstances have been successful in causing the subject to reproduce the memories of events which occurred during distraction of attention, and we are justified, on these grounds, in asserting positively that in the above instance it would be possible to effect reproduction of the subject matter which was read while the individual was pursuing the extraneous line of thought. During distraction of his attention the person was not blind; he continued to read automatically but the visual perceptions were not synthetized with consciousness. Hysteric amaurosis is identical in character. The visual apparatus of the hysteric is normal, and subconsciously visual perception occurs, as can be demonstrated readily, only she is not attending to these perceptions. They remain subconscious; they are not synthetized with consciousness. In her case the mental blindness is due to dominant belief in her inability to see, and just as soon as she can be induced sincerely to expect disappearance of her blindness it will disappear.

Let us adduce another common example of the psychic blindness of absent-mindedness. While walking along the street a person whose attention is concentrated upon some problem passes his friends, perhaps looking directly at

them, yet fails to respond to their salutations. Subconsciously he sees them, but there is lack of that personal perception which is requisite for conscious recognition. In the same manner he fails consciously to perceive the many visual impressions which arise, and he may even walk past his destination.

By means of post-hypnotic suggestion one is able to create a psychic blindness which will persist after the hypnotic state has been caused to disappear. When produced in this manner psychic amaurosis possesses all the characteristics of that due to hysteria, and in itself is indistinguishable from hysteric blindness. With the assistance of hypnotic suggestion, or of post-hypnotic suggestion, one can cure hysteric amaurosis. These facts, together with the known influence of extra hypnotic suggestion in causing, modifying, and in curing hysteric blindness, seem to be sufficient grounds for the proposition that hysteric amaurosis, in common with other symptoms of the disease, is always the effect of expectant attention, suggestion, or whatever one wishes to call the process. As such, the condition is really the same as that produced with hypnosis, from which it differs only in its mode of production; the first being due to autosuggestion that has been induced by some external stimulus, or suggestion, that even may have proceeded accidentally from a second person, and the other being the direct

effect of *intentional* suggestion by another. Otherwise, the nature and mode of genesis of inorganic psychic blindness have never been explained in a manner that is compatible with what now is known of its qualities as revealed by experimentation.

Hysteric monocular amaurosis might be compared with the habitual suppression of the secondary image of diplopia in cases of strabismus. A more accurate comparison is afforded by the voluntary suppression of visual impressions arising in one eye, when, with the other, the pathologist is intently studying some specimen with the microscope.

Even more interesting is hysteric systematized amaurosis, a condition in which lack of conscious perception of visual impressions is confined to one or more kinds of objects; vision otherwise being normal. This symptom, too, is but the pathologic exaggeration of what is a normal peculiarity. The following citation from Jastrow of a normal instance of systematized psychic amaurosis and anæsthesia serves well to introduce the subject:

"A business man living in the suburbs, as he entered the train upon his homeward journey, reflected upon the threatening aspect of the sky, and considered the chances of finding his carriage awaiting him at the station, in case the impending rain came on. His hopes were doomed to disappointment; and he resigned

himself to a wet walk home. As the downpour became heavier, he more keenly regretted his wavering hesitation in the morning in regard to taking an umbrella. When at length he presented himself dripping at his door, he was greeted with shouts of derision at his plight; for tucked under his arm was the umbrella, unopened, unperceived. So convinced had he been that he had neglected to provide himself with this protection, that the repeated solicitations to his senses offered by the presence of that object passed unheeded. Doubtless, in the course of his walk, the umbrella had fallen within the range of his vision; and certainly his arm had sufficiently attended to the feelings resulting from the carrying of the article to prevent its being dropped. To these appeals to see and feel and recognize did his mental prepossession render him blind and insensible. Had any passer-by broken through his "absent" spell and pointed out his neglected opportunities, he would at once, and with some surprise and amusement, have seen and felt and consciously used what in his reflections he repeatedly longed for: in this last consideration lies the normality of the experience." (The Subconscious, 1906, p. 306.)

Now, let us consider a pathologic instance; one described by Morton Prince in his report of the Beauchamp case of multiple personality. One of the alternating personalities had lost one of Miss Beauchamp's rings. In order to insure the safety

of the other two a second personality had strung them on a ribbon about her neck. Believing that all the rings had been lost Miss B. could neither see nor feel the remaining two. Even when the rings were struck together she was unable to hear the resulting click.

In these two cases, the one normal and the other pathologic, we have to deal with lack of synthesis with consciousness of all kinds of sensory perceptions arising from certain objects—an umbrella in the first instance, and a ribbon and two rings in the second one. The deficit, therefore, is systematized and it involves each sense that is stimulated by these objects. In other words, owing to a firm conviction the umbrella, ribbon, and rings had ceased to exist as far as consciousness, only, of the various perceptions of each of these objects was concerned. Excluding consciousness each of these objects was perceived. Otherwise, as Jastrow remarks, how could the man have carried his umbrella? And in Miss B.'s case a second personality had actually suspended the rings from her neck. In the normal instance the business man was dominated by the conviction that he had left his umbrella at home with the consequence that all kinds of perceptions arising from the umbrella failed to be synthetized with consciousness. In the same way Miss B. was dominated by the belief that her rings were lost.

Suppose, now, that a hypnotic subject be given

the suggestion that a third person, C, has left the room, and that only he and the one who induced hypnosis remain. After dissipating the hypnotic condition it will be found that the subject exhibits a systematized lack of conscious perception of all kinds of sensory impressions aroused by C., and the resulting condition resembles that of the business man and of Miss Beauchamp. Only in this case the conviction is deliberately suggested upon the subject by his hypnotizer while in the other instances it arose spontaneously.

The various kinds of systematized deficiency of personal perception have been designated negative hallucinations. Though convenient, this term, originated by Bernheim, has been considered inappropriate. More objectionable are descriptions in which the lack of conscious perception of various kinds of sensory impressions is said to be due to dissociation of these percepts from consciousness. In order that percepts can be dissociated antecedent synthesis must have occurred, and if dissociation took place after synthesis, then the resulting condition would be amnesia instead of a disturbance of perception.

Diagnosis of Binocular Hysteric Amaurosis. Without the use of psychic means it may be difficult, indeed, to exclude organic blindness. With the assistance of hypnotism one may be able to make a positive diagnosis of hysteric amaurosis by means of demon-

strating the existence of unconscious vision. For the patient, while in the hypnotic state, perhaps can be caused consciously to see as well as before the onset of the symptom, and, in addition, he may be induced to state the name of an object which had been held before his eyes previous to hypnosigenesis.

Excluding the application of hypnosis as a diagnostic means there are other tests which may not be so successful. A simple one is to have the patient look at an open book. Normally there is an irresistible tendency for the eyes to traverse the page, and if these ocular movements occur with the patient one is justified in presuming that some kind of vision exists.

By means of having the amblyopic patient write automatically Binet succeeds in demonstrating subconscious perception of letters which are too small for the patient consciously to perceive; and the writing of these letters proceeds while the patient reiterates his inability to recognize them. (On Double Consciousness, 1905, p. 32.)

With the assistance of the method of guessing it is possible, sometimes, to secure positive results in cases of hysteric amblyopia. Suppose we tell a patient whose visual acuity is 10/70 that we know she is unable to read the smaller letters two lines lower down on the test card, but that we desire her simply to make rough guesses of these letters as we point to them. Often the

guesses are correct, just as in case of anæsthesia the number that flashes into the patient's mind after we have touched the anæsthetic region a certain number of times is the same as the number of tactile stimuli. In either case the patient declares that she does not see the letters or that she has not perceived any sensations in the affected region.

Naturally, it may be possible to improve visual acuity by employing suggestion—even without induction of the hypnotic state. When resort is had to this kind of suggestion it is important that the patient should not become aware of its use, and, therefore, we must disguise the suggestions. For example, after noting the patient's visual acuity, we tell her that different test lenses are to be tried in order to determine which improves her vision the most. Now, by employing plain glasses while making free use of suggestion, it may be noticed that vision is materially improved.

Diagnosis of Monocular Hysteric Amaurosis. As a layman is ignorant of the physiology of the visual mechanism, unilateral psychic blindness, whose character is founded solely upon his conceptions of vision, necessarily must present some very curious physiological inconsistencies when the condition is subjected to various tests.

In the study of patients with hysteric monocular amaurosis even more apparent than with

other symptoms of the disease, is the fact that the results of experimentation are determined almost entirely by the patient's conception of the disturbance with which he is afflicted. He is blind in one eye only because he is firmly convinced that such is the case. Any test which is adopted for the purpose of demonstrating vision in the amaurotic eye and whose significance is not appreciated by the patient will succeed, then, for the reason that it does not conflict with his belief. We should be able, therefore, to differentiate readily this visual disturbance from organic blindness of one eye. The differentiation is rendered still more simple by reason of the number of excellent tests to which we can resort.

In the presence of binocular single vision diplopia occurs when one eyeball is displaced by pressure. The same effect may be produced more accurately and less rudely if we take advantage of the principles of refraction and place a prism before one eye. In case of organic monocular amaurosis both displacement of one eyeball and the use of a prism before either eye must necessarily fail to produce reduplication of the image. Consequently, if a patient with unilateral blindness can be caused to experience diplopia by either of these means the existence of binocular vision is proven—the blindness is psychic. It is possible that the test may fail because of lack of synthesis with

consciousness of the perception of the image which is on the same side as the amaurotic eye. Or, when the prism is used, the two images may become fused if the ocular muscles are strong enough to counteract the refractive effects of the prism.

A test has been described by Prince that does not require any apparatus but which necessitates care in its application. While the patient is reading, a pencil is slipped before the normal eye. If the blindness is organic, one or more words, being obscured by the pencil, are not seen by the patient. If the condition is hysteric the patient may continue to read without skipping any words, thus demonstrating the perception of visual impressions which could have originated only in the blind eye. One must be careful to hold the pencil between the normal eye and the printed page and to hold it still. Likewise the patient's head must not have moved during the test. Like other tests this one will fail if the patient becomes aware of its full significance. To render its performance less obvious artifice may be employed. For instance, one may disguise the test by saying: "When I raise this pencil continue to read, but do so more rapidly." Then, apparently as an accident, the pencil is raised high enough to be in the visual axis of the normal eye.

Another experiment whose application is easy, but which may not yield positive results,

is that of Pitres: Even though a screen—a blotter for instance—is held vertically between the patient's eyes and at right angles against his face he may be able to read from a book in spite of the fact that one lateral half of the page can be seen only with the amaurotic eye. If the screen is not held perpendicular to the center of the page the results are vitiated.

Monocular amaurosis must be psychic if the patient, when looking through a stereoscope, acknowledges that the picture stands out in relief, because the successful use of this contrivance requires binocular single vision. Besides these simple measures, tests dependent upon hypnosis, and similar to those employed in detection of hysteric binocular amaurosis, can be applied with positive results in many cases.

With the assistance of special apparatus successful results are more apt to be secured. Stoeber's ingenious device comprises a pair of spectacles containing one red and one green glass, and an object consisting of a printed word, of which the letters are alternately red and green upon a black background. When a patient with organic blindness fixes the object through these glasses he can read only those letters whose color is the same as that of the glass which covers the normal eye. If a patient is able to read the whole word then his

visual defect either is due to hysteria or it is feigned.

When the box of Flees is used what is seen with one eye appears to have been seen with the other, so that the hysteric reports having observed either both objects or only the one which, in reality, was seen with the amaurotic eye. The malingerer asserts that he noticed but one object, and he indicates the one which we know could have been seen only with the eye which he affirms is blind. While the individual with organic monocular amaurosis reports having observed an object which, to his surprise, appeared to have been seen with his blind eye.

Unfortunately, the results of these experiments, except those dependent upon hypnosis, may be the same as the results obtained with malingerers. As far as the tests themselves are concerned there may not be any way of differentiating the two conditions and the diagnosis may depend entirely upon associated symptoms and upon the experience of the examiner. In commenting upon this diagnostic difficulty H. Gradle writes: "The distinction between hysteric—or let us say psychic—blindness and wilful simulation can not be based upon objective findings. They would be the same in both cases. We must base our judgment on a psychologic analysis of the patient's mind and object."

If the utmost care is not exercised in making the tests the answers of a clever malingerer, or of a simulating hysteric, may be the same as those of a patient with organic monocular amaurosis. In either case the subject may be enabled to do this if he has the opportunity furtively to close the supposedly blind eye and thus to acquire information concerning what should be seen were his feigned symptom real. Or, if intelligent, he may be able to grasp the significance of certain of the tests. As a hypnotized malingerer ordinarily would not acknowledge that previous to the induction of hypnosis he had seen an object with his "blind" eye such a test would be useful; unless we accept as true the fallacy that a hypnotized person always must tell the truth.

The results, too, of the tests that have been described may appear positively to prove that hysteric unilateral blindness is only a feigned symptom! But how can we account for those cases in which the condition persists for years in patients who do not have any motive for simulation, or who have excellent reasons for desiring that their vision should be normal? For instance, Prince's amblyopic patient had gone to much trouble in his attempt to qualify for appointment to the police force. As he desired this appointment it was not to his interest to simulate defective vision. Yet the tests seemed to indicate that he was deliberately

malingering; provided that one disregards the fact that the same results could be obtained in hysteria. This patient had perfect binocular vision but each eye separately was amblyopic. A prism having been slipped before either eye during binocular fixation amblyopia developed at once. Now, the patient once having reacted in this manner the same results were obtained when two prisms were placed together so as to counteract each other and then held before his eye. One who failed to consider the pathogenic influence of belief would conclude at once that this patient was a malingerer.

According to de Schweinitz hysteric amaurosis may last even as long as ten years, though vision has ultimately returned in all recorded cases. When the patient comes under treatment before the condition has had time to become fixed, removal of the symptom is comparatively easy.

In addition to its diagnostic value, hypnotic suggestion possesses great therapeutic efficiency. Even though the patient be not hypnotized synthesis of the visual function with consciousness possibly may be effected without difficulty by means of suggestion. In case suggestion is employed the various suggestions should be made as positive as possible without, however, allowing the patient to become aware of its use. The necessity for this lies in the fact that the more apparent and more direct the suggestion the

more inclined is a hypnotized patient to accept and to act upon it, while in the application of suggestion to one who is not hypnotized, the chances of successful realization vary directly with the patient's ignorance of its employment.

The effect of suggestive treatment is materially increased when the suggestions are reinforced and disguised by the use of such an impressive agent as electricity. The physician suggests, for instance, that the blindness will disappear when the electrode is applied. Or the patient may be placed in a dark room, and, after having received an electrical treatment, her eyes are bandaged while she is assured that her sight will be normal when the bandages are removed the next morning.

As each therapeutic failure tends to convince the patient of the incurable nature of her malady it is best not to incur this risk and to waste valuable time by holding hypnotism in reserve. Instead of waiting until other measures have failed we should use first, as J. Arthur Booth has recommended, the therapeutic resource which offers the greatest possible chance of success; and this is hypnotic suggestion—the most effective kind of suggestion. (Hysterical Amblyopia and Amaurosis—Report of Five Cases Treated with Hypnotism, Med. Rec., Aug. 24, 1895.)

Dyschromatopsia. In the same manner that complete amaurosis occurs so also does

psychic blindness for colors—*achromatopsia*. To the achromatopic patient all colors appear grey. The oft quoted experiments of Parinaud show that hysteric achromatopsia is entirely a psychic disturbance. In case of monocular color blindness a green object appears to be grey when seen by the achromatopic eye. Now, if diplopia is produced by placing a prism before the normal eye the patient may declare that both images are green, as they really are. But, the production of diplopia necessitates vision with both eyes. Therefore, perception of one of the images is dependent upon an eye which is color blind. If the patient states that both images are grey then the use of the prism has effected a temporary achromatopsia of the normal eye. When the prism is placed before the achromatopic eye the patient declares either that both images are grey or that they are green. Naturally, these results imply the same peculiarities of perception as did the results obtained when the prism was placed before the normal eye.

Bernheim was the first to show that achromatopsia could be caused by means of hypnotic suggestion, and that when thus produced the condition experimentally is identical with that of hysteria. Discarding, therefore, the involved explanation of Parinaud he contended that both hysteric and hypnotic achromatopsia were the product of suggestion. In this he is sustained by the modern French neurologists.

When there is total lack of synthesis with consciousness of perceptions of only one kind of color impressions the cause of the defect should be readily discovered. A hysteric who has had some terrifying or disagreeable experience may afterwards develop achromatopsia for one color which was prominently identified with the painful experience. This partial achromatopsia constitutes part of a reaction of defense for the reason that the memory complex concerning the experience has been dissociated from consciousness and as conscious perception of the color would subsequently tend, by association of ideas, to recall the dissociated complex these perceptions are also repressed.

In these cases, too, the disturbance can be demonstrated to be psychic in nature. The neat experiments of Charcot and Régnard suffice. These depend upon the principles of fusion of colors. When red and green are fused by mechanical means—rotating disc—the patient with monocular blindness for green declares that she sees a greyish tint. Now, such a tint, under these circumstances, requires the perception of its green constituent; otherwise, the patient, perceiving green as white, should see light red as the result of fusion of red and green.

The different kinds of psychic disturbance of color perception are very infrequent in this country. May not the reason for this depend upon the fact that physicians of this country do

not usually include in their examinations tests of color perception? Therefore, dyschromatopsias not being sought they are less apt to be accidently suggested upon the patient.

Concentric Contraction of the Visual Fields. This "symptom," one of the classic "stigmata" of hysteria, was considered to possess considerable diagnostic importance. It is probable, however, that it is always caused by suggestion during perimetric examinations and, consequently, it is indicative only of the abnormal suggestibility which is essential to hysteria but which also occurs in other psychoneuroses. In reference to 86 cases reported from Bernheim's clinic Amselle states that not even once were hemianæsthesia and retraction of the visual fields discovered in patients who had not been examined previously. (Conception de l'Hystérie, p. 237, 1907.)

That concentric contraction of the visual fields is not a spontaneous symptom of hysteria can be reasonably ascribed to the improbability that a layman could conceive such a condition. As the symptoms of hysteria are dependent either upon the conceptions of the patient or upon accidental suggestion—using this term in its most comprehensive sense—one might lay down the axiom that the hysteric is incapable of presenting any symptom of which previously she did not have some conception, or which was not suggested upon her. Neither can one experience

a dream whose content is independent of all previous knowledge, nor can one cause a hypnotic subject to hallucinate an object which he had never perceived.

It is not intended to convey the impression that concentric contraction of the visual fields is always created by reason of a faulty technique of examination, but that the examination *per se* is sufficiently suggestive to determine the production of this condition unless the physician employs suggestion in order to counteract the tendency. Except those patients whose fields previously have been examined, it is most unusual to find contraction of the fields in hysterics who are examined with the rough finger test, provided that this is performed in a manner that is not too elaborate nor too prolonged. With the perimeter, an imposing and suggestive apparatus and one which requires that the patient be subjected to an unduly prolonged examination, it is rare, indeed, not to find moderate or high grade contraction of the fields unless the physician, by his antagonistic suggestions, prevents the production of the condition.

During former investigations of the visual fields it was my custom to eliminate verbal suggestion, at least, by explaining to the patient just what was required; stress being laid upon the injunction that she was to say "now" *just as soon as she saw* the peripheral white spot. Then the

examination was commenced and finished without further directions or remarks. In this manner suggestions, whether tending to cause or to prevent the production of concentric contraction, are avoided and only the suggestive character of the examination itself remains. Under such conditions reduction of the visual fields varying from a moderate amount to contractions so extreme as to indicate pin-point vision were invariably found; even though previous rough finger tests showed, in almost every case, that the fields were approximately normal.

On the other hand, if the physician desires to avoid the production of concentric contraction it is easy to do so by means of suggestion and persuasion during the course of the examination. By this means distraction of the patient's attention is avoided, she is induced to attend strictly to peripheral vision, and, in addition, if vision at any one radius does not correspond to the normal she is assured that she can do better than that and the test is repeated. When this technique is adopted concentric contraction of the visual fields rarely will be found in cases whose fields are being examined for the first time.

In order to prove that hysteric contraction of the fields was only subjective it was my custom to hold up several fingers in the arc of the perimeter well beyond the limit of the field which had been previously determined. Upon asking

the patient if she saw the fingers the reply would be negative. Then, resorting to hypnosis, it was usually easy to induce her to state just how many fingers she had seen in the supposedly blind portion of her field. I soon found, however, that hypnosis was unnecessary; for it was much easier simply to ask her in a positive manner how many fingers *she saw*. Since adopting this procedure not one of perhaps 25 consecutive cases of hysteria has failed to answer correctly the majority or all of the times that the test was repeated.

Such a test, which is but one of many similar ones which may be employed, experimentally proves at once that hysteric concentric contraction of the visual fields is only a psychic disturbance. Clinically, this fact has been known for many years. How, otherwise, could we explain the following case described by Janet: A boy who developed crises whenever he saw a flame, possessed visual fields which were contracted to 5°, yet a crisis could be precipitated by holding a lighted match at 80° while the patient was at the perimeter and fixing its central point. (Major Symptoms of Hysteria, p. 197.) How, too, could we account for the fact that there is not any embarrassment of the actions of those patients whose fields are contracted to a point, and in whom the condition has been fixed by repeated examinations and clinical demonstrations. In reference to this

anomaly Janet writes of a patient who was able to play at ball in spite of an extreme degree of contraction of the fields. It would be hardly necessary to state that this would be absolutely impossible in case of organic contraction to the same degree. Try to imagine anyone playing ball while looking through a pair of telescopes or a double barrelled gun!

In spite of the laws of optics a contracted field of hysteric origin remains the same regardless of any increase of the distance at which it is taken; instead of enlarging, as it should. Naturally, this inconsistency depends upon the conception of the visual defect that the patient formed during the first perimetric examination. Being ignorant of optics she believes that the area which she can see should remain the same whether she is fixing upon an object one foot away, or on one which is at a distance of 20 feet. It was remarked, also, that the size of the field could be made to vary according to the use of suggestion by the examiner, and according to the mental state of the patient while being examined. By causing the patient to concentrate her attention upon some problem Janet secured variations amounting to as much as 60°. Finally, it is possible, with hypnotic suggestion in almost all cases and with suggestion during the usual state of consciousness of the patient in most cases, to enlarge, perhaps even to the normal, a contracted field. Likewise, one may

create a contraction in patients whose fields previously had been normal.

From a diagnostic point of view there should not be the slightest difficulty in differentiating the concentric contraction of hysteria from the infrequently encountered similar visual defect of multiple sclerosis, or the quite common one of tabes dorsalis—50% of 25 cases in which the disease had existed for an average of 5½ years —and of other varieties of optic atrophy.

The advisability of producing contraction in hysteric patients is decidedly questionable; though apparently they do not seem to inconvenience or to harm the patient in any way, considered as a means of diagnosis the field changes that have been described can be regarded only as indicative of abnormal suggestibility and not as essential symptoms of the disease. Furthermore, the functional contraction which is elicited by examination is by no means pathognomonic of hysteria; in the other psychoneuroses it can be observed just as frequently, but usually not to such an extreme degree as we find in some cases of hysteria.

Ordinarily, it is thought that spiral fields are characteristic of neurasthenia, and that the condition is due to progressive fatigue occasioned by the examination. In hysteria, nevertheless, spiral fields are created more commonly than in neurasthenia when the perimetric ex-

amination is conducted according to the technique which I have described. Moreover, fields which are concentrically contracted may be changed into spiral fields solely as the effect of the manner in which the patient is questioned during repetition of the examination. Let me adduce a typical example:

As examined by the rough finger test, the visual fields of Lizzie B. were approximately normal; perimetric examination, however, resulted in production of spiral fields of small amplitude. Being so marked, the contraction could not have escaped detection by the finger test; consequently, it must have been caused by the perimeter. During the same visit, reexamination resulted in diminution of the fields to a point. Seven days later the fields were found to have remained unchanged. After about six months had passed, she was subjected to a third perimetric examination. Commencing at 0° and progressing rapidly from the nasal to the temporal fields, the tests were made 30° apart in order not unduly to prolong the examination. After one complete circuit of the left eye she was allowed to rest five minutes, and then the right field was taken. Although hysteria is characterized by the opposite of abnormal readiness to the induction of fatigue, periods of rest were allowed on returning to the left eye, at the termination of each complete circuit. Proceeding in this manner, the spiral

field which was produced could not have been due to transient fatigue. Being able, afterwards, correctly to count fingers which were held in the arc of the perimeter at the periphery of what should be the normal field, she was given a brief explanation of the fields of vision, and, furthermore, the inconsistency of the results in her case was demonstrated to her. Now, upon repeating the examination, her fields were found to be practically normal. Repeated single tests which were without definite radial sequence verified the boundaries of these fields.

When produced by the technique already described both spiral fields and the fact that, in case of concentric contraction, the field of the second eye examined is usually smaller than that of the first, can be explained acceptably by assuming that the further one proceeds with the examination the better able is the patient to grasp the suggestion which it implies, and, consequently, the more forcible it becomes. This cumulative effect of the suggestive nature of perimetric examination is like the cumulative effect of suggestions during the hypnotic state. When a hypnotized subject refuses at first to accept a suggestion often it is necessary only that it should be repeated several times, and with each repetition one can plainly see that the resistance of the subject is decreased until, finally, the suggestion is accepted and acted upon.

The Color Fields. As investigations of the color fields require extended perimetric examination, and as it is extremely difficult to induce a hysteric to concentrate her attention upon one subject for any length of time, such investigations necessarily must be extremely variable in their results; even more so than we find in our examinations of the fields for white.

It is well known that the size of the visual fields of a hysteric to a great degree is dependent upon suggestion and upon the amount of concentration of the patient's attention on the examination; distraction of her attention being accompanied by reduction in the size of the field which is being examined at the time. Whenever the patient becomes preoccupied with some extraneous idea, or whenever her attention is distracted by some noise, someone entering the room, or what not, we notice corresponding modifications in the size of the visual field. We may find, therefore, that the field for red is larger than that for blue simply because the patient's attention was concentrated upon the examination while she was being tested with the first color, whereas her attention was distracted during the tests with blue. Moreover, being prolonged the examination is apt to arouse a state of indifference, or of active rebellion, with the consequence that each successive field may become smaller. The cumulative effects of the suggestive character of the examination tend to

produce the same sequential modification. A priori, then, one should not expect to find any typical or constant relative disturbance of the color fields. Clinically, this inference receives abundant verification.

In their mode of production contractions in the color fields need not be considered as differing in any way from contraction of the field for white; all such contractions being the effect of the increased suggestibility characteristic of hysteria. It has been considered that inversion of the color fields was a prerogative of hysteria. Of the greatest importance, therefore, are the findings of Bordley and Cushing relative to the color fields in cases of brain tumor. Their investigations show that inversion is just as characteristic of brain tumor as it has been considered to be of hysteria. (Archives of Ophthal., Sept., 1909.) In a later paper Cushing and Heuer (Jour. of the A. M. A. 1911, 2, p. 200) state that out of 123 patients with brain tumor in which perimetric examination could be made there were 53 who presented contraction and inversion of the color fields, and, what is more important, in ten of these the disturbances occurred in the absence of choked disc, or else only a very incipient process was found. On the other hand, one must not forget the frequency with which symptoms of hysteria, as Gowers has remarked, are painted upon a background of organic disease, and thus to ascribe

to brain tumor symptoms which may have been the effect of increased suggestibility due to superimposed hysteria.

Hemianopsia. That hemianopsia ever occurs as a symptom of hysteria has been the subject of controversy. At all events, a few cases have been reported, and besides, there is no good reason for assuming that this type of defect in the visual field cannot develop. The infrequent occurrence of hysteric hemianopsia can be explained on the grounds that laymen do not possess knowledge of the difference in the cerebral distribution of fibres from different parts of the retina, and, therefore, they cannot have any conception of hemianopsia. Moreover, perimetric examination, as usually conducted, tends to cause general reduction of the fields and can hardly convey to the patient the suggestion of hemianopsia.

In about 50% of those afflicted with migraine the attack is preceded by some visual disturbance. Quite commonly this assumes the form of a scintillating scotoma which may produce complete but transient hemianopsia. Now, is it not reasonable to assume that a hysteric who in this manner has acquired knowledge of homonymous hemianopsia subsequently may develop hysteric hemianopsia? May not the symptom of migraine or of auto-intoxication become fixed as a result of the tendency of hysteria to appropriate and to elaborate the symptoms of other diseases? At

any rate, one patient stated that shortly before psychic homonymous hemianopsia appeared she had experienced for the first time a scintillating scotoma which had obscured the same half of her visual field. If hysteria were more commonly associated with true migraine probably hysteric hemianopsia would be less infrequent.

A second patient declared that she had been well until her fifteenth year when suddenly she lost the ability to see anything to one side of the point at which she was looking. Without being prompted she explained in detail the nature of this difficulty. Careful inquiry failed to disclose the cause of the symptom; she had never experienced a scintillating scotoma, and, before the onset of the symptom, her eyes had not been examined. Following the first attack of hemianopsia she had been subject, for a whole year, to other ones that lasted about twenty minutes and which occurred several times daily. Beginning with this visual disturbance a most severe type of major hysteria became evolved.

Deafness. In hysteria, whatever is done or perceived in a more or less unconscious or automatic manner is apt to be accomplished or perceived better than when the act receives the conscious attention of the patient. On account of this, together, perhaps, with the effects of the suggestion implied by the test, hysteric patients who present evidences of possessing an

ordinary amount of strength almost invariably are incapable of registering on the dynamometer a degree of strength greater than that of a child. Or, when testing vision, conscious perception of the test letters may be no better than 10/50, yet, at other times, visual acuity of the same patient is obviously normal. In the same manner hysteric patients whose hearing evidently is normal almost always show, when tested, decided reduction of acuity of audition; unless this functional impairment is prevented by suggestion.

Suppose we subject a number of hysterics to an examination in which the following technique be employed: The patients are directed to declare when they hear the watch, and then no other remarks are made during the course of the test. Each ear is tested by gradually bringing a watch from an inaudible distance towards the ear. It will be found that with a watch that should be heard at about three feet, in the neighborhood of 90% of the patients do not detect the ticking at a distance greater than about five inches, and approximately 10% require the watch to be placed in contact with the ear.

Having examined a hysteric who asserts that she is unable to hear the watch until it is placed in contact with her ear, and having had her close her eyes, let us hold the watch stationary at almost the extreme limit at which

it should be heard. Now, by asking at frequent intervals, "Do you hear it yet?", the impression is conveyed that the watch is being gradually brought closer to her ear, as it was during the first test. After a few such questions the patient announces that she perceives the ticking. In the absence of an organic cause for the impairment this experiment in my hands has failed to succeed in only two instances. In a few cases, however, before a positive response can be obtained it may be necessary to bring some metallic object into contact with the patient's ear, thus causing her to believe that it is the watch which she feels. Having demonstrated the subjective nature of the reduction in hearing, and while retaining the watch in the same position, the patient is told to open her eyes. Being aware of the deficiency brought about by the first test, she at once expresses surprise at the distance at which she heard the watch, and, what is important, she continues to hear it at the same distance.

In testing with the Galton whistle often we find that the highest notes are not consciously perceived by the patient, but this has the same significance as the defects brought about by testing acuity of audition, or of vision. Occasionally, it is possible to demonstrate very nicely with the Galton whistle the pathogenic effects of a suggestive technique of examina-

tion. The patient is told to apprise us when she begins to hear the whistle, and then, progressively lowering the pitch from the extreme limit of normal audibility, we find that she fails to hear the whistle until a note of, for instance, 21,000 vibrations is obtained. Now, suppose we instruct her to notify us when she is not able any longer to hear the whistle. Continuing gradually to lower the pitch, infrequently we may find that she is unable to hear a note whose vibrations are less, for example, than 10,500. No other interpretation can be placed upon such curious results than that they were determined entirely by suggestion.

In addition to these rudimentary and practically inocuous kinds of temporary disturbance of auditory perception, complete unilateral or bilateral psychic deafness is uncommonly encountered. When unilateral, psychic deafness, like hysteric monocular amaurosis, may occur in association with hemianæsthesia and other disturbances of perception of sensory impressions arising from the same side of the body; the association of these symptoms being due solely to the patient's belief that hemianæsthesia must necessarily include homolateral loss of all forms of sensibility.

When occurring independently of hemianæsthesia, unilateral psychic deafness is often evolved from some unimportant local affection which concentrates the patient's attention upon

her ear, and upon hearing, or it may be the consequence of the psychic effects of traumatism to the ear.

The history of one patient showed that the condition had developed from what presumably was a furuncle of the external auditory canal. Two years after the onset, a competent otologist, finding that the auditory apparatus was normal, advised her to consult a neurologist. When engaged in conversation, the patient did not appear to be inconvenienced except when her attention was directed to her hearing. Then, turning her sound ear towards the person with whom she was conversing, she seemed to experience difficulty in perceiving what was said, and occasionally she required that a sentence be repeated. When tested with the fork, she asserted that she was unable to hear either by osseous or aerial conduction. With the exception of the psychoneuroses such a finding indicates organic nerve deafness. But, when the auditory apparatus of only one side is the seat of organic nerve deafness, osseous conduction is not entirely lost because the vibrations are transmitted across the skull to the opposite side.

When examining patients with psychic deafness, the results of tests necessarily must be in accordance with the patient's conception of deafness. Consequently, all kinds of auditory impressions, whether these be the product of

aerial or of osseous conduction, fail to be synthetized with consciousness—they lack personal perception. If a hypnotized subject accepts the suggestion that he cannot hear with one ear, one will find that the same results are obtained with the fork. In addition to those patients who present loss of both forms of sensibility occasionally we find one in whom the tests show apparent loss of osseous conduction with preservation of aerial conduction. This finding can occur only as a result of suggestion in psychoneurotic patients.

Reverting to our patient, after inducing the hypnotic state, it was easy to effect partial return of bone conduction. After a few subsequent treatments, air conduction at first was secured, and then caused progressively to improve until it became normal. During the following eighteen months that she was under observation not any further auditory difficulty was experienced.

The occasional association of deafness and mutism is probably due to the popular knowledge of the frequency with which mutism occurs as a complication of organic deafness. In the case of Mabel A., total psychic deafness, associated with mutism, suddenly developed without any ascertainable cause. After lasting four days, speech and hearing returned, but for over a month, attacks of deaf-mutism recurred every afternoon at the same hour that

the first attack had appeared. Save the initial alarm at the sudden appearance of these major symptoms, she was not disturbed in any way, and, in fact, she was reluctant to consult a physician. During the first attack, aerial and bone conduction were absent, and she seemed totally unable to speak or to hear. In this case, too, the symptoms were readily influenced by hypnotic suggestion—adopted on the nineteenth day—and, after two treatments, the attacks no longer recurred.

The psychic nature of hysteric disturbances of sensory perception are well illustrated by Oettinger's interesting case. After a period of auto-hypnotic sleep, this patient exhibited deaf-mutism which persisted for over four months. In explanation of his comprehension of what was said to him, he asserted, in writing, that he could read the lips of those who talked to him, yet it was found that he was unable to read the lips during silent speech. Furthermore, when the babies cried in the children's ward he volunteered his services, though he could obtain knowledge of the opportunity for his assistance only by hearing the crying. Several other inconsistencies were also apparent. The symptoms disappeared spontaneously in this case; faradism having been ineffectual and efforts to hypnotize him having proved fruitless. Afterwards, he spoke complacently of his successful resistance to suggestion. (Jour. of Nerv. and Ment. Dis., 1908, p. 129.)

The character of the disturbance has been ludicrous in some of the recorded cases of hysteric deafness. Knapp's case, for example, was treated for a couple of weeks with suggestive applications of faradism with the result that her complete deafness was changed to word deafness. The peculiarity consisted in her ability to hear her own voice, though unable to hear the voices of others. Further improvement having taken place, she became able to hear the voices of females, but psychic deafness for male voices continued to exist. (Monatsschr. f. Psychiat. u. Neur., Dec., 1907.)

The distinction between organic deafness and that due to hysteria should not be difficult. Sometimes one can startle the patient into disclosing her consciousness of a noise. This procedure, however, not only is crude but it should succeed only in cases of malingering, or of hysteric malingering. A better method is to attempt to produce, by suggestion, subconscious reaction to auditory stimuli. One may succeed in demonstrating that a case of deafness is not organic by means of another device which is dependent upon suggestion. In the presence of the patient the physician, after having determined that what he is about to suggest is not already present, incidentally remarks to whoever happens to be present that the patient should present such and such a sign. If the case is one of hysteria, subsequent examination

may show that, in the interval, the patient has developed the sign which she has been induced to believe is essential to her disease. Finally, with suggestion it may be possible at once partially or completely to restore normal hearing.

Smell and Taste. Psychic anosmia and psychic ageusia are encountered less frequently than similar disturbances of vision and of audition because the senses of smell and of taste are rarely examined by physicians, and, therefore, these conditions are not so liable to be produced as artefacts. Probably the majority of cases of unilateral anosmia and ageusia are only part of hemianæsthesia, and the association of the symptoms is the consequence of the patient's conception of hemianæsthesia. By reason of his faulty technique of examination some physician creates hemianæsthesia, and then he, or some other one, discovers by further tests that the patient has homolateral deafness, amaurosis, anosmia, and ageusia.

When cases of anosmia and ageusia are subjected to critical examination the results, from a physiologic standpoint, are remarkable. Mary D., for example, never had been aware of any disturbance of sensory perception until a physician had "discovered" hemianæsthesia and hemianalgesia. Months afterwards she was unable, during my tests at least, consciously to perceive tactile, thermal, painful, or pressure stimuli applied to the right side. The other

physicians who had examined her had not tested her special senses, and, as far as she was aware, these had not been impaired. My examination, conducted in the usual manner, i. e., without attempting to avoid the production of symptoms, showed unilateral deficiency of all the special senses of the right side. Therefore, either these troubles had existed unbeknownst to her, or my examination was their sole cause. At any rate, though olfaction by means of the left nostril was not impaired she asserted that she was unable to perceive any odor when she smelled various test substances while the left nostril was occluded. Except as a manifestation of hysteria this condition would be most remarkable, indeed, for even if the odors were received only through the nostril of the affected side unilateral anosmia could not cause total abolition of the sense of smell. Not only would the posterior naris of the sound side aid in detection of the odor, but, with some odors, the associated sense of taste alone would be sufficient.

From a physiological point of view even more extraordinary is the fact that inhalation of ammonia through the right nostril was absolutely devoid of reaction. As a consequence, then, of her firm conviction that she was unable to smell with her right nostril, there results associated immunity from the usual effects of ammonia upon respiration. This in-

stance of the total inhibition of the effects of such a powerful respiratory stimulant is a remarkable, but not unique, example of the exalted power, in hysteria, of the mind over the body.

In the same patient the substances usually employed for testing the gustatory sense were readily perceived when applied to the left side of the tongue. On the other side, however, they were not detected until the tongue was withdrawn, and then only with difficulty, or not at all. In addition to unilateral anosmia and unilateral ageusia, this patient had almost complete monocular amaurosis—V. O. D. 4/200—unilateral deafness, and incomplete hemiplegia.

CHAPTER V

Visceral and Circulatory Derangements

RESPIRATORY SYSTEM. Except complete cessation of breathing hysteria can occasion all the possible variations of respiration. The attention of the patient may have been concentrated upon the respiratory effects of great excitement with the consequence that these normal reactions have become fixed as symptoms of hysteria. Or, the respiratory symptoms resulting from accidental and transient organic disease may be prolonged in the same manner. There is a tendency for a hysteric to develop the symptoms with which she is most familiar, so that long after having become acquainted with the symptoms which resulted from some organic disease, or from excitement, these may return as hysteric manifestations consequent upon some psychic trauma which she has undergone. In this case the relation between the exciting cause and its effect is difficult to understand unless the former incident is known.

Naturally the frequency of respiration becomes increased during convulsive and emotional attacks, but sometimes the symptom occurs independently, and it may persist for weeks. Often it is paroxysmal; recurrences

being effected by mental stresses. The rate may be increased to an extent which can be scarcely credited. In a case recorded by Charcot respiration attained a frequency of 180 per minute. During hysteric "coma" brought about by a mental shock one patient who came under my observation exhibited a respiratory rate of 120 for several hours, over 100 for more than a day, and between 80 and 108 for several days. A few days later a second attack developed, and during five consecutive days respiration was maintained between 50 and 80. It is remarkable, indeed, that such a rate could have been maintained for this length of time. One has only to attempt voluntarily to breathe this rapidly in order at once to discover how difficult and how exhausting it is.

Spasmodic disturbances of respiration are usually due to true volitional tics of the respiratory muscles, and they occur in patients who do not present any of the signs of hysteria, but rather those of psychasthenia. These tics, like similar ones in other parts of the body, are produced by obsessions which the patient is impelled to gratify, and they are accompanied by self-consciousness and shame. Generally speaking, spasmodic disturbances of breathing are not due to psychasthenia when they cannot be voluntarily duplicated. For instance, one never encounters attacks of sneezing or of *true* singultus in typical psychasthenics. The

mechanism of the spasmodic respiratory symptoms of hysteria is entirely subconscious, and, therefore, these manifestations are not produced by conscious efforts, nor are they dependent upon conscious impulsions. Instead of being ashamed the patient ignores her respiratory tics; she may be even unaware of them.

Abnormally frequent sighing and yawning is often seen in cases of hysteria, but these symptoms are comparatively unimportant. Several times a year the dispensaries of large hospitals receive patients who present continued singultus vera. By means of the newspapers these cases may be traced from one dispensary to another until, after several days, weeks, or months, the symptom disappears. In spite of various kinds of treatments in different hospitals, hiccough had continued to occur about every thirty seconds in one of my cases. By means of hypnotic suggestion the symptom was immediately removed.

Attacks of sneezing and of rhinorrhœa sometimes appear during emotional excitement. In one instance I have known a young lady by psychic contagion alone to contract such attacks from her sister. When sufficiently elaborated these attacks constitute what cannot be differentiated from the syndrome known as hay fever. Suppose an acute rhinitis with sneezing is acquired by an individual at a time of the year when ordinary colds are uncommon

—when hay fever is in season. More than one kind friend may express sympathy while informing the patient that the condition is hay fever, and that it will return at the same time every year. This suggestive explanation is apt to be accepted, especially by one who obviously is hysteric, with the consequence that the individual begins to anticipate his "hay fever" at about the same time the following year. Now, if this state of expectant attention is sufficiently developed to produce recurrence of the symptoms of what originally was an ordinary cold, then a precedent is established, an association neurosis is formed, and each recurrence only strengthens the primarily weak associations just as any habit becomes more fixed as the result of repeated indulgence.

Morton Prince has reported an instance of "hay fever" existing as a neurosis in five members of one family. One of these patients was told by a physician that fruit was capable of inducing attacks. Subsequently, she was unable to eat fruit without suffering from hay fever. The evident influence of autosuggestion in the production of hay fever caused Prince to propound the question: "May not a very large number—one cannot generalize too extensively and say all—of the cases of recurrent periodic hay fever develop in the same way? May not the attacks come on at a certain date because of apprehension or expectancy, by

which the patient suggests to himself or herself that at that time he or she will be susceptible to external irritants of one kind or another, and then at the suggested time the irritant produces its habitual and expected effect?'' (Annals of Gynæcology and Pædiatry, 1895).

How often we encounter patients who declare that their hay fever will begin on a certain date,—that such always has been the case! Because change of environment is reputed to be effectual in warding off recurrences of hay fever, and because they know from experience that such often has been the case, these patients, if their position in life enables them to do so, will commence long in advance of the set date to arrange their affairs so that they can escape to their favorite retreat just before the attack is due. In a case of hysteria such a state of mind certainly is most favorable for the induction of what is expected so confidently; either the appearance of an attack about the time it is expected, or the avoidance of one resulting from the patient's conviction relative to the prophylactic effects of a prospective vacation. Concerning the yearly recurrence of attacks on a fixed date, Prince questions the pathogenic influence, other than through the agency of expectancy, of the relative position of the moon to the earth.

That many, at least, of the cases of what clinically is known as hay fever are really symp-

toms of hysteria is shown by the fact that we can cure many of these cases by no other means than suggestion. On the other hand, Prince has been able to produce coryza by means of deliberate post hypnotic suggestion. Having suggested during hypnosis to "B. C. A." that the presence of a certain flower caused hay fever subsequently she developed coryza when exposed to this flower, even though she had never had hay fever, or thought about it, before the suggestion had been made. After having been awakened she did not remember the suggestion, and when the coryza appeared the thought flashed into her mind that if it were summer she would think she had hay fever. (The Mechanism of Recurrent Psychopathic States, with Special Reference to Anxiety States, Jour. of Abnormal Psychology, Vol. 6, p. 148.)

It seems that hysteria is capable of causing what cannot be differentiated from asthma, as far as symptoms and clinical signs are concerned. As a matter of fact, many cases of psychogenic asthma have been reported, and the cure of such cases through the agency of hypnotic suggestion is ample proof of the validity of the diagnosis.

For nine years, Mr. X., an individual whose manifestations were those of hysteria and who also presented psychasthenic fears, had been afflicted with frequently recurring attacks which were typical of asthma. The seizures first appeared during an attack of influenza, and they

recurred every morning at about three o'clock. Examination of his chest revealed the typical signs that one would expect to find in a case of asthma of nine years duration. Since the first treatment with hypnotic suggestion the patient has not had a single attack of asthma. (Report of a Case of Dissociated Personality, Jour. of Abnormal Psychology, Aug.-Sept., 1909.)

Before the true nature of the condition was recognized another patient had been treated in a hospital a whole week for cardiac asthma. The attacks occurred several times daily and each lasted about a half hour. One appeared during his visit to the dispensary. Following a sudden deep inspiration, rapid stertorous respiration developed, the face became cyanotic, and lachrymation occurred. After about a half minute the neck became extended and rigid, the hands tightly clenched, the limbs catatonic, and the pupils widely dilated. This phase of the seizure lasted about two minutes, and then he relaxed, and dyspnœa continued in association with a succession of brief attacks whose main features were general but moderate clonic movements and a state of consciousness resembling the somnambulistic states of hysteria or of hypnosis. That the attacks were due to hysteria was indubitable. As the patient did not return—he lived at some distance from the city—the outcome of the treatment is not known.

A third patient, aet. 23, had suffered from asthma since an attack of pertussis in his eighth year. Severe asthmatic seizures which lasted over 48 hours occurred about once monthly. These were so severe that he was totally incapacitated for three or four days, and, on account of losing so much time from his work, he was about to be discharged from his place of employment. Each of the major attacks was preceded for 24 hours by decided aggravation of his bronchial symptoms. In no way did his seizures differ from what is typical asthma, and not any of the physicians who had examined him had questioned the diagnosis. In addition to the severe attacks, he was subject to lesser ones which occurred twice every night and which lasted about three-quarters of an hour. These mild ones were prone to arouse him at two and at five-thirty in the morning. The physical signs were those characteristic of well developed asthma; namely, the physical signs of chronic bronchitis and emphysema.

The treatment consisted entirely of hypnotic suggestion. The first treatment was given while the patient was having one of his severe attacks. Immediately upon the induction of hypnosis his respiration became decidedly less difficult. During the following 24 hours his symptoms, though very distressing, were much less severe than usual. Extending over a period of four months he was hypnotized seven

times with the following results: After the first treatment he did not have a single severe attack, and the milder ones progressively improved until they, too, entirely disappeared after the sixth treatment.

Alimentary System. The experiments of Pawlow, Cannon, and others have shown the great importance of the effects of appetite and of emotions upon the secretion of gastric juice. The experiments of Pawlow, (The Work of the Digestive Glands, 1910,) for instance, showed that the mere exhibition of food to a dog resulted in the secretion of gastric juice in quantities which actually exceeded those provoked by allowing the dog to swallow the same food and to eject it through an œsophageal fistula. It was observed, also, that the quantity of juice secreted largely depended upon the intensity of the desire for food, so that the author says emphatically: "Appetite spells gastric juice." The truth of this dictum was unquestionably demonstrated by the fact that though the sight of food induced almost immediate and copious secretion of gastric juice, yet, providing only that the animal was unaware of the presence of food, the direct introduction of food through a gastric fistula was followed by the secretion of a greatly inferior quantity of the juice, and the appearance of this secretion was delayed for one-half to several hours.

Depressing emotions not only cause an unpleasant dryness of the mouth but they are capable also of inhibiting gastric secretion. Moreover, the digestive juices are not secreted in sufficient quantities when one eats without experiencing desire for food, or when there is positive distaste for food. As a secondary process fermentation occurs, followed by auto-intoxication and anorexia—a vicious circle is formed.

In most of the cases of gastric neurosis the patient, possessing an elaborate system of erroneous ideas concerning digestion, believes that he has some organic gastric disease. Constantly being obsessed by the fear that through some dietary indiscretion he will aggravate his existing dyspepsia the flow of digestive juices is rendered insufficient as a result of his depressing mental states during meals. This type of gastric neurosis, or "emotional dyspepsia," may be classified as a manifestation of psychasthenia. Less frequently the condition occurs in hysteria. In this case the imperfect secretion of the digestive juices is due to absence of appetite—psychic anorexia—; the patient eating in order to avoid the importunities of the family. Or, attacks of indigestion may follow undue emotional activity.

The following instance, mentioned by W. B. Cannon, well illustrates the disturbing effects of emotional excitement upon digestion: "A

refined and sensitive woman who had had digestive difficulties, came with her husband to Boston to be examined. The next morning the woman appeared at the consultant's office an hour after having eaten a test meal. An examination of the gastric contents revealed no free acid, no digestion of the breakfast, and the presence of a considerable amount of the supper of the previous evening. The explanation of this stasis of the food in the stomach came from the family doctor, who reported that the husband had made the visit to the city an occasion for becoming uncontrollably drunk, and that he had by his escapades given his wife a night of turbulent anxiety. The second morning, after the woman had had a good rest, the gastric contents were again examined; the proper acidity was found, and the test breakfast had been normally digested and discharged.'' (Amer. Jour. of the Med. Sci. Apr. 1909.)

Anorexia. The most grave of the symptoms of hysteria is anorexia; a condition which only too frequently has eventuated in death. Since the introduction of rectal alimentation and the stomach tube death from hysteric anorexia would seem to be unpardonable. The anorexia has been ascribed to visceral anæsthesia, but it should be remembered that this anæsthesia, like the other varieties, must be only subjective; the condition being the result of lack of synthesis

with consciousness of the perceptions of coenesthetic impressions pertaining to the feeling of hunger — the feeling of need for food. The stomach is not the only factor concerned in the feeling of hunger, and, therefore, a hypothetical gastric anæsthesia does not explain hysteric anorexia. If an ecstatic is firmly convinced that she can live without eating, if she believes that she is the instrument of a miracle, complete dissociation can occur of all the perceptions concerned in the composition of the feeling of hunger, just as Miss Beauchamp developed systematized lack of perception of auditory, tactile, and visual impressions arising from the rings which she thought she had lost.

The origin of this peculiar and dangerous symptom may have been some former event which was prominently associated with eating, or the idea of hunger, and which made a strong impression upon the patient's mind. Or it may have been the result of hysteric elaboration and fixation of a purely symptomatic and transient distaste for food. In some cases the symptom is the direct outcome of too careful dieting, by physicians, of patients with hysteric disturbances of digestion; the patient gradually eliminating from her diet one kind of food after another, as the feeling of the need for food gradually is dissociated. Regardless of the cause, the patient refuses to eat because there is an absolute lack of desire for food, even though there is not any

real disturbance of the digestive system, and in spite of the fact that emaciation progresses rapidly. Janet describes a case whose anorexia was dependent upon hallucinatory commands from her dead mother, who, reproaching her for some faults she had committed, told her that she was not worthy to live, and that by refusing to eat she should rejoin her in heaven. (Mental State of Hystericals, p. 288.)

In addition to true psychic anorexia hysteric individuals may simulate the condition in order to attract attention to themselves and to excite wonder. In such cases the patient affirms that she can live without eating, or that she cannot eat because she has no desire for food; yet emaciation does not ensue because privately she is consuming a sufficient amount of food. Notwithstanding the fact that the condition is simulated the patient cannot be called a malingerer with any greater justice than one can apply the same designation to an insane patient who simulates certain of his manifestations in consequence of motives which, themselves, are symptoms of insanity.

As these cases of simulated anorexia or fasting usually occur in hysterics, the patient, if prevented from secretly obtaining nourishment, may starve herself to death rather than acknowledge the deception which she has practiced. Hammond made a collection of cases of simulated fasting, and in one instance—Sarah

Jacob—to the disgrace of all those concerned, including a vicar, nurses, and physicians, the patient was forced to starve herself to death because the careful guarding by nurses that had been sent from Guy's Hospital finally prevented any further eating in private. In the interest of science and truth, then, a hysteric girl was forced to commit suicide. Those who were responsible for the fatal outcome escaped serious consequences, except the patient's father and mother, who were committed to jail for 12 and 6 months respectively. (Nervous Derangement 1883, p. 95.)

The anorexias of hysteria should not be confounded with those of psychasthenia. The psychasthenic refuses to eat not because he lacks desire for food, but principally through fear of the gastric distress, or other suffering, that he knows will surely follow. This emotional dyspepsia of expectancy and fear constitutes the very common gastric neurosis in whose production the physician is the main factor by reason of his paying too much attention to the organs of digestion instead of to the patient.

Vomiting. Hysteric vomiting, another serious manifestation which has been known to terminate in death, and which usually occurs in association with hysteric anorexia, is not at all uncommon. Generally its origin is found to be some former acute disease which occasioned

vomiting, and, after the original cause subsided, the symptom continued as a manifestation of hysteria. By reason, too, of expectant attention, or what really is unconscious autosuggestion, the physiological vomiting of pregnancy can be caused to persist.

Just as the normal person may experience nausea, and even vomiting, as a concomitant of disgust, so the hysteric may suffer from hyperemesis as a result of subconscious ideation. It is well known that association of ideas is capable of producing vomiting. A typical instance is mentioned by Carpenter: "Thus Van Swieten relates of himself, that, having chanced to pass a spot where the bursting of the dead body of a dog produced such a stench as made him vomit, on passing the same spot *some years afterwards* he was so vividly affected by the recollection, that the sickness and even vomiting recurred." (Mental Physiology, p. 432, 1883.) If Van Swieten had forgotten the original disgusting experience with the consequence that each time he vomited he had been ignorant of its cause, then his case would be identical with the mechanism of production — subconscious association of ideas — of symptoms of hysteria. As it was it resembled psychasthenia in that the symptoms were the effect of conscious association of ideas.

The hysteric, then, may vomit whenever there is aroused into activity, by association of ideas,

a dissociated complex of memories of some former experience which made a distinct impression upon the patient, and in which vomiting was a prominent factor. As the provocative association of ideas usually occurs below the level of consciousness, it is only by some psychoanalytic method that the origin of the condition can be discovered. Motor activity of this sort, whether it is a convulsion, a contracture, a tremor, vomiting or what not, constitutes what is termed motor automotism; a condition characterized by motor activity independently of consciousness; a dissociation of motor activity.

In treating a case of alcoholism with hypnotic suggestion we may artificially create a motor automatism whose psychic mechanism is identical with that of hysteria. While the patient is in the hypnotic state suggestions are made that tend to strengthen his moral character; which are directed against the fundamental neurosis; ones which are calculated to abolish the craving. Then we may suggest that the idea of drinking liquor will always be associated with a feeling of disgust, that the odor alone will nauseate him, and that if he should ever take any alcoholic drink he would vomit immediately. If the patient is a good hypnotic subject he will not remember any of these suggestions after the hypnotic state is dispelled. In this manner we have produced a dissociated memory com-

plex which, when aroused into activity by the proper stimulus, should produce vomiting. Now, if at any time the patient should take some whiskey he would probably vomit, and, like the hysteric, he would not know the real cause of his vomiting—the association of ideas would be subconscious.

Often the vomitus contains blood, and then the diagnosis becomes difficult indeed. If we accept the possibility of vasomotor disturbances due to the disease, then true hysteric hæmatemesis can occur just as other hæmorrhagic conditions have been known to be produced both by hysteria and by hypnotic suggestion. Excepting this possibility, one which is the subject of much controversy and which must be extremely infrequent, all cases of hysteric hæmatemesis are merely instances of deception; as far at least, as the presence of blood in the vomitus is concerned. At all events, in each of the few cases which have come under my observation the patient had swallowed blood procured by picking at the nostrils until epistaxis was produced.

Even though a patient with hysteric vomiting deliberately simulates hæmatemesis such deception cannot be regarded other than as a manifestation of a pathologic mental state. With no other object than to gain sympathy certainly no normal persons would carry the deception so far as to seek, and to undergo,

operations for supposed gastric ulcer. This type of deception is malingering only to the same extent as that of cases of hysteria in which simulated anorexia has terminated in death. Surely, malingering for the purpose of exciting sympathy, or wonder, is as much a symptom of hysteria as a psychic hemiplegia or a psychic amaurosis.

The differential diagnosis in cases of hysteria presenting hæmatemesis is extremely difficult. Only those who have had cause to worry much about cases of hysteria whose symptoms included anorexia, vomiting, localized epigastric pain, tenderness, and perhaps hæmatemesis, can appreciate just how difficult the diagnostic problem may become. Even if hæmatemesis appears in a patient who is known to be a major hysteric, one may not jump at conclusions and dismiss the question of gastric ulcer with the inference that the condition is "only hysterical." In some cases the physician must treat the patient as though the symptoms were due to gastric ulcer, notwithstanding that he may surmise them to be but manifestations of hysteria and knowing that if this be the case his treatment, even if successful as far as the present symptoms are concerned, is almost sure to aggravate the fundamental psychopathic state.

A problem that infrequently may confront the surgeon is due to hysteric reproduction of

the symptoms of bowel obstruction. In addition to obstinate constipation, abdominal distention, pain and vomiting, the patient may develop fæcal vomiting. In some cases rectal injections of various fluids, including castor oil, have been followed in from 12 to 15 minutes by expulsion of the injected substance from the mouth.

Aerophagia. Swallowing of air frequently occurs as a symptom of hysteria. As a consequence of the distress which is occasioned the patient voluntarily belches at frequent intervals. Ordinarily an eructation occurs more or less spontaneously; otherwise it must be initiated by gulping of air. The ærophagic is the victim of a vicious circle: she belches in order to relieve her gastric distress, and with each eructation she swallows more air.

In case the ingested air is forced through the pylorus meteorism develops. The old theory that attributed meteorism to paresis of the intestinal muscles with consequent expansion of the gaseous contents of the bowels, is not in accordance with the fact that usually the condition disappears when the patient is anæsthetized. Instead of causing meteorism to vanish the muscular relaxation which is induced by ether or chloroform anæsthesia should permit further abdominal distention were the condition due to intestinal paresis.

When abdominal distention is produced by

spasm of the diaphragm the distention cannot be as great as that due to ærophagia. It is this spastic type which disappears during general anæsthesia, and, as shown by Janet, during laughter, sobbing, and hiccoughing—phenomena which are dependent upon normal activity of the diaphragm. By means of radiographic examinations Bernheim found that the diaphragm is lowered during meteorism, and that as the abdominal distention is diminished through the agency of suggestion the diaphragm gradually ascends and commences to take part in the function of respiration. (Hypnotisme & Suggestion, 1910, p. 380.)

Meteorism may lead to enormous distention of the abdomen. The enlargement may be gradual and associated with symptoms of pregnancy, so that in not a few cases of pseudocyesis physicians have been deceived until labor should have commenced. The production of simple amenorrhœa by expectancy and fear is quite common, and this effect of vaso motor disturbance is much more remarkable than any of the other symptoms which enter into the make up of pseudocyesis. The symptoms are due to the patient's conviction that pregnancy exists, and, needless to say, this belief may be born either of great desire for a child, or of intense fear of becoming pregnant. Preston mentions the ludicrous case of a girl who believed herself to be pregnant as a result of masturbation and whose abdo-

men was moderately distended. (Hysteria and Allied Conditions, 1897, p. 181.)

Wesley Taylor describes a case of hysteric ærophagia in which the abdomen was distended to a degree greater than that of pregnancy at the ninth month. The meteorism of this patient, a girl of twenty years, occurred paroxysmally, and during the height of one of the attacks, the condition somewhat resembled general peritonitis. The attacks appeared as often as every two weeks and lasted as long as ten days or more. The interesting feature of the case was the fact that once she had been subjected to an operation and, on another occasion, she escaped a second one only because of the rapid disappearance of the distention during etherization. (Jour.-Record of Med., 1909, p. 74.)

In addition to general gaseous distention of the abdomen localized tumor like masses have been known to occur in hysteria. These phantom tumors, whether due to localized collections of gas in the intestines or to isolated muscular contraction in the abdominal wall, have been mistaken for real tumors, and even operations have been performed to the chagrin of the surgeon.

The appetite of the hysteric is capricious. In addition to craving unusual articles of diet she may ingest such substances as plaster and hair. Including his own case, Butterworth collected from the literature 42 cases of hair

ball of the stomach. Of these patients 39 were females. The largest hair cast weighed about six pounds. The final results of 33 cases comprised 17 laparotomies with one death, 6 deaths from peritonitis and perforation, and 10 deaths from inanition. Thus the outcome was fatal in over half of the cases in which this was known. The correct diagnosis was made before operation in only five instances. (Jour. of the A. M. A., 1909, 2, 617.)

It is difficult to conceive the possibility of the production by hysteria of symptoms capable of being mistaken for acute appendicitis, yet such is not rare. Twenty cases of hysteric pseudo-appendicitis were compiled by Karl Urband. A patient of his own developed acutely localized pain and rigidity, associated with slight abdominal distention, vomiting, superficial respiration, temperature 99⅕ and pulse 72. Subsequently these symptoms subsided, but several weeks later, following a chill, the temperature rose to 104⅖ and the pulse to 144 only to fall again to normal the next day. After twelve more days he had another chill and similar rise in temperature in addition to severe pain in the region of the appendix. At operation the appendix was found to be normal. (Wiener Med. Woch., 1908, p. 1918.)

Every one of the usual symptoms of acute appendicitis, including moderate rise of temperature, was reproduced by a major hysteric

who came under my own observation. The elimination of appendicitis was accomplished only by the discovery of two significant features: during the painful reaction produced by deep pressure over McBurney's point the patient's respiration became deeper than usual, and when the pressure was exerted while the patient's attention was distracted both the rigidity and the painful reaction were found to be absent.

Prolonged attacks of diarrhœa or of obstinate constipation are common. More important is the occurrence of what is called mucus, or membranous, entero-colitis. Whether this condition be looked upon as a symptom of hysteria or as an independent clinical entity, the fact remains that it is said to occur only in psychoneurotic persons. The affection is characterized by attacks of severe abdominal pain that may last several days or longer and which are associated with, or are followed by, the presence in the stools of considerable mucus and even blood; the patient perhaps being free from abdominal symptoms in the intervals between attacks. When the mucus is passed in the form of tubular casts that present the appearance of membranes, the condition is called membranous entero-colitis. Either of these abdominal crises may recur for many years, apparently without being influenced by treatment.

A patient who presented an admixture of symptoms of hysteria and of psychasthenia for years had been subject to severe attacks which usually followed undue excitement, and which occurred several times a month. During the crises her stools were extremely offensive and consisted largely of mucus mixed, at times, with blood. Rarely casts were passed. While she was travelling in Germany some intra-abdominal operation was performed during one of the attacks, but subsequently recurrences took place as before. Much to my surprise the attacks ceased to appear shortly after the adoption of treatment with hypnotic suggestion which was directed mainly against the associated symptoms.

The different abdominal syndromes resulting from hysteria are most resistent to treatment, and each may appear, continue indefinitely, and then disappear suddenly without apparently having been influenced at all by any of the therapeutic measures that had been adopted.

Genito-Urinary Derangements. Increased frequency of urination often occurs in hysteria, but more commonly this symptom is caused by a psychasthenic fear that the necessity to urinate will appear at a time when social considerations would render the act impossible; the patient urinates, therefore, at frequent intervals in order to avoid such embarassment, and, when the fear is well developed,

he may refrain even from going to places of amusement or to social events. In such cases the fear results from conscious association of ideas with the memory complex of some former experience when distress was caused by actual necessity to urinate at a time when the circumstances were such that the act was impossible. In hysteria, on the other hand, the urinary frequency is not associated with fear, and the underlying association of ideas is not consciously known. Further to differentiate the two conditions one might say that the psychasthenic urinates too frequently in order that he may be in a position the longer to hold his urine should this be required, while the hysteric variety is due to unconscious autosuggestion, and the act of micturition occurs regardless of thoughts of future environment. In psychasthenia the condition is the result of an obsession; in hysteria it is due to what is termed a sensory automatism. As a consequence of subconscious ideation the hysteric is subject to hallucinations of imperative sensory impressions from the bladder.

Polyuria occurs frequently at the termination of hysteric seizures, and, less often, an increased amount of urine may be passed daily for long periods of time independently of crises and without discoverable cause other than hysteria.

That complete anuria lasting several days

can occur as a symptom of hysteria has been the subject of much dispute, but more than one case has been recorded in which deception could be eliminated. Less infrequently the daily amount of urine voided has been reduced to a few ounces, or less, and the deficiency has continued for days or weeks at a time. In either case the absence of uræmia is explained by the fact that in these patients anuria is compensated by profuse sweating, vomiting, or diarrhœa. Frequently patients are encountered who maintain either that they do not pass any urine at all, or that the amount has been reduced to a few spoonsful, yet, when kept under supervision, or if catheterized, the results show that deception is being practiced.

The majority of cases of hysteric retention of urine are due to the continuation produced by autosuggestion, of the common but temporary post-operative retention. In such cases the longer catheterization is continued the longer it will be necessary, so that strenuous means should be adopted to cause the patient normally to urinate soon after operations have been performed. Retention often is simulated, and, like anuria, the deception can be exposed by catheterization and close observation.

Quite the reverse of the ordinary conceptions of the sexual instinct in hysteria is the actual state of the genital function. Taking into consideration the vast numbers of hysterics, rarely,

indeed, does the disease produce inordinate desire and gratification. Less infrequently the sexual instinct manifests itself by symbolic mental activity, or by conversion into the physical manifestations of hysteria. Usually the patient not only loses whatever sexual desire she may have possessed, but sexual intercourse becomes repugnant. It is not at all uncommon for patients to remark that since they became nervous they have been sexually indifferent, whereas the opposite formerly was the case with them. It is true, however, that excluding those cases due to cultivation, degeneration, and insanity, the majority of sexual perverts owe their perverse inclinations to associations of ideas which were usually originated in early life. A number of cases have been subjected to psycho-analysis and the reports have been most instructive, both in accounting for conditions which heretofore have been erroneously grasped, and in adducing further corroboration of the theory of submerged complexes as the underlying psychic mechanism of the psychoneuroses.

In addition to other manifestations of hysteria and of psychasthenia a patient who was studied by Sidis was obsessed with ideas of homosexual relations. Hypnoidal psychoanalysis brought out the fact that when the patient was in his eighth year some older schoolmates had forcibly violated him. Having

informed his parents of the fact he was removed from the school. "This experience lapsed from his conscious memory, but remained firmly implanted on his subconscious memory, giving rise to the apparently unaccountable homo-sexual ideas at which he felt so much disgust. The homo-sexual ideas were really foreign to his character and no wonder his whole nature felt revolting disgust towards them." (Studies in Psychopathology, Boston Med. and Surg. Jour., Mar. 14 to Apr. 11, 1907.)

According to the nature of the perversion itself, and according to the character of associated symptoms, the patients may be classified either as hysterics or as psychasthenics. When the perverse ideation or actual gratification is dependent upon obsessions against which the patient strives in vain the condition may be designated psychasthenic. Besides the instance just mentioned the Rev. A. Kampmeier's case illustrates the character of psychasthenic deviations of the sexual instinct. After reading a book which dealt with the evil consequences of sexual irregularities the patient "became very chaste from fear of the horrible consequences of a lapse from virtue." Obsessions having developed from the material afforded by the well-meant but decidedly pernicious book, the patient suffered much psychic distress and then, as he expresses the outcome: "My demon finally drove me to

make true what I imagined would inevitably come about had I not read that book. I gave myself up to sexual excesses, not for the pleasure of them, since in my case this was impossible, but to make true what I thought would have been my fate." (Confessions of a Psychasthenic, Jour. of Abnormal Psych., vol. 2, p. 112.)

As a slight amount of distress in the ovarian regions may be considered a concomitant of normal menstruation it is just as natural for this normal symptom to become elaborated and fixed by autosuggestion as it is for a symptomatic anæsthesia or paralysis to become fixed in a similar manner. Therefore, in most female hysterics a suitable foundation is commonly at hand for the development of psychic pains in the ovarian regions. It is unusual for a laparotomy to show that both ovaries are entirely free from lesions, negligible or otherwise, and, following the removal of one or both ovaries, the pain is very apt to disappear as the result of the powerful suggestive effects of an operation. These facts account for the former disgraceful popularity of oophorectomy. Possible suggestive effects being insufficient justification, gynæcologic operations should never be performed on a hysteric unless the same procedures positively would be indicated in the absence of hysteria.

In reference to the relation between the

psychoneuroses and the pelvic viscera the results of Clara T. Dercum's statistical analysis of 591 gynæcologic patients are most interesting. "The above tables," she concludes, "speak for themselves; there is obviously no relation between hysterical stigmata and pelvic disease; this is likewise true of the symptoms of neurasthenia. That hysteria and neurasthenia can coexist with pelvic disease goes without saying, just as they may coexist with a brain tumor or a broken leg. The above statistics do not even show that neurasthenia or hysteria exist as frequently in pelvic diseases as in other visceral affections. Certainly the above facts prove that operations on the pelvic and other viscera for the relief of nervous symptoms have no justification. It is perfectly clear that no operation should be performed which has no positive surgical indications. When this subject is fully understood the fastening up of so-called loose kidneys, the removal of normal ovaries and tubes, of normal uteri, of normal appendices, of pieces of normal coccygeal bone, will cease, as will also repair of trivial cervical lacerations. A careful examination of the records from hospital laboratories will abundantly testify to this assertion of the removal of normal organs." (Jour. of the A. M. A., March 13, 1909, p. 848.)

Circulatory and Trophic Phenomena. Cardiac neuroses seldom are found in hysteria;

these conditions being part of the symptomatology of psychasthenia. Increased frequency of the cardiac rate accompanies hysteric crises for the reason that it is a normal concomitant of emotional excitement or a normal consequence of muscular effort. Less easily understood are some of the vasomotor and trophic manifestations which seem rarely to occur as symptoms of hysteria, and whose origin in this manner is denied by many. Sudden flushing of the face, coldness, and even local asphyxia, are ordinary symptoms. The effect of the mind upon the vasomotor function is apparent in the anæsthesias both of hysteria and of hypnosis in that it is difficult sometimes to obtain a free capillary flow of blood from anæsthetic regions. More remarkable are the rare instances of spontaneous capillary hæmorrhage that occurred in the so-called stigmatics. Of these the best known is Louise Lateau; a typical hysteric in whom hæmorrhages mainly from the hands, feet, forehead and left side of the chest appeared every Friday during a state of ecstasy in which she acted the crucifixion. The hæmorrhages took place even though an apparatus was applied for the purpose of preventing deception. According to Dr. Lefebvre about 7/8 of a quart of blood was lost each time the hæmorrhages occurred. Physicians who studied the case came to the conclusion that the phenomena resulted from autosuggestion. With hypnotic sugges-

tion Bourru and Burot, and Mabille succeeded in producing similar manifestations.

Hysteric purpura is an uncommon condition. While examining a hysteric more than a dozen purpuric spots varying in size from ½ to 3 inches in diameter were found in various parts of her body, yet she had not known that a physical examination was to be made and she denied having been injured in any way. Her blood was found to be normal. The purpuric areas did not disappear for more than two weeks.

Circumscribed œdema may develop acutely or slowly, and, after lasting an indefinite length of time, it may disappear just as suddenly or gradually. The lesion is white or bluish and pits but little under pressure. When occurring about joints—especially when associated with pain and paresis—the condition may be mistaken for arthritis. What has been termed hydrops articulorum intermittens is similar to the œdema of hysteria, and it occurs most frequently in the functional neuroses. As defined by W. Healy it is: "A chronic affection characterized by an effusion poured out into one or rarely more joints, at regular or irregular intervals, without any ascertainable exciting cause for the recurrence, and without any perceptible anatomic alteration as cause or result of the repeated attacks." (Surg. Gyn., and Obstet., 1908, p. 466.) The nature of the con-

dition is indicated by the fact that psychic influences are capable of inducing attacks, aborting them, and even in curing the disease. The possibility that some of the symptoms of hysteria may result from localized areas of angioneurotic œdema in the brain has been suggested tentatively by G. L. Walton. (Internat. Clinics, vol. 3, series 18, p. 242.)

Hysteric gangrene is another of the manifestations which is subject to controversy; not only because of the difficulty in explaining its mechanism, but also because of the frequency with which the lesions are the product of deception. Thus, Dieulafoy's patient, a male hysteric, by chemical irritation caused multiple recurring gangrene which was diagnosed trophic ulceration by a surgeon who amputated one of the patient's arms because of the continued recurrence of the lesions. (La Presse Médicale, 1908, p. 369.)

There are numerous instances on record of the successful production, by means of hypnotic suggestion, of dermographia, inflammation, bullæ, ulceration, and gangrene. Many of these experiments were conducted under conditions which precluded the possibility of deception. By means of the application of objects with the suggestion that they were hot, it was possible with Ilma S. to cause skin lesions varying from simple redness to actual ulceration. These reactions were obtained even when the parts

were carefully bandaged and sealed. (An Experimental Study in the Domain of Hypnotism, by Von Krafft-Ebing, Chaddock trans., 1896.)

Beaunis described some interesting experiments which were performed by Focachon in the presence of Bernheim, Liébault, and himself. Postage stamps having been applied to the subject's back with the suggestion that they were blisters, bandages were adjusted. Twenty-one hours later a decided inflammatory reaction was found when the stamps were removed, and these areas developed, in eight more hours, into blisters. After fourteen days suppuration still continued. On the other hand, by means of suggestion Focachon prevented any reaction from a real blister which was applied to one arm, while a second one placed on the opposite arm produced the usual effect. (Du Somnambulisme Provoqué, 1886.) Certainly if such lesions can be produced with hypnotic suggestion then there is no reason why hysteria cannot do likewise.

As the influence of emotional states upon the secretions is well known the fact that profuse localized or general sweating may occur in hysteria is accepted without dispute.

A remarkable instance has been reported by Curschmann. Attacks of sweating appeared during what the patient believed was influenza, and her daughter became subject to the affec-

tion by reason of psychic contagion. Three times daily at a fixed hour, and continuing for a year, as much as 300 c. c. of perspiration was lost at a time. These attacks were unaccompanied by any other physical or psychic disturbances. Both patients recovered under suggestive treatment. (Münch. Med. Woch., Aug. 27, 1907.)

With hypnotic suggestion one can readily induce attacks of profuse hyperhidrosis; it suffices to cause the subject to believe that she is becoming disagreeably warm.

Some neurologists contend that there is no such thing as hysteric fever: others are convinced that fever can occur as a manifestation of hysteria. Some observers who limit the symptomatology of hysteria to those conditions which can be reproduced with hypnotic suggestion would exclude the possibility of hysteric elevations of the temperature. At all events, Von Krafft-Ebing repeatedly was successful not only in causing the temperature of Ilma S. to vary as much as 2.5° F., but in causing the variations to occur at a fixed hour, and to persist for days at a time. Reverting to hysteria, Osler declares that in at least two of his cases a diagnosis other than hysteric fever was impossible. In one of these the temperature rose to 102 or 103 every afternoon for four or five years. (Principles and Practice of Medicine, 1902, p. 1119.)

In 1858 a girl who had been found unconscious in the street was brought to Bamberger's clinic in a delirious state with a temperature of 106.7° F. The diagnosis was declared to be either typhoid fever or miliary tuberculosis. The following morning all of her symptoms had disappeared; she was well. It was found that having been jilted by her lover at a dance she became greatly excited, and, while running home, had fallen unconscious in the street. (Muench. med. Woch., No. 19, 1903.)

George L. Walton reports a case of hysteria in which a temperature of 105 was noticed as an isolated symptom that persisted for a week and then gradually dropped to the normal during the course of several months. In discussing this case Knapp spoke of a case of hysteric hemianæsthesia and hemiplegia in which the temperature varied from 105 to 95, and Courtney of another hysteric whose temperature had been 100 to 100½ for several years. (Jour. of Nerv. and Ment. Dis., 1907, p. 266.)

Following an attack of influenza the temperature of one of my cases of hysteria continued at 99 to 100½ for over a month in the absence of any ascertainable cause for the elevation and without its being associated with any other symptoms. When the regular use of the thermometer was discontinued the fever immediately disappeared.

After reporting two cases of hysteric hyper-

thermia Von Voss concluded that elevation of the temperature may occur as a manifestation of hysteria in severe cases, and that it often accompanies convulsive seizures. (Deutsche Zeitschr. für Nervenheilkunde, Band 30, Heft 3-4.)

Naturally, elimination of all possible causes for fever other than hysteria is difficult if not impossible, but careful observation in these and other similar cases which have been reported tend to justify the assumption that variations in the bodily temperature can be produced by hysteria. As already noted the fact that the temperature has been altered through the agency of hypnotic suggestion by more than one observer tends to confirm this belief.

CHAPTER VI

Psycho-Motor Disorders

PARALYSIS. Other than through the agency of accidental occurrences there is no reason why one hysteric should be paralyzed, another afflicted with convulsions, and a third contractured. These conditions, as well as the other innumerable manifestations which are possible in hysteria, really are potential in every case, and for that reason justly they may be denominated "accidents." One patient has psycholeptic attacks and another paralysis simply because the first accidentally was exposed to psychic contagion as a result of witnessing an epileptic attack, and the second is paralyzed because he has been subjected to some traumatism which, in his opinion, was capable of inducing paralysis. Casual events and the conceptions of the patient determine both the production and the character of the various manifestations.

According to Ziehen the symptoms of hysteria are due to the remarkable vividness with which mental representation occurs in this disease; the idea of paralysis being sufficient to evoke the symptom. As the idea of paralysis may be aroused by numerous kinds of excitation so the symptom superficially may appear to be widely varied in its mode of genesis.

When a patient who has slept with the head pillowed on the arm develops what should be a transient brachial paralysis the condition may become fixed and continue as a manifestation of hysteria. In the same manner monoplegia may be evolved from the transient motor and sensory symptoms resulting from undue maintainance of an extremity in a constrained position. In either instance the paralysis should be accompanied with anæsthesia because the fundamental and temporary organic motor disturbance having occurred in association with numbness both of these symptoms would probably become fixed.

As the effect, too, of the lay conception that paralysis necessarily must produce numbness the two conditions are usually found together, and their boundaries may coincide regardless of differences in nerve supply. The pathogenic influence of the same conception is noticeable in those patients who present impairment of strength in members which have become the seat of anæsthesia of medical origin. For instance, the patient is unaware of any disturbance of sensation or of muscular power until she is subjected to examination. Then, without being associated with any loss of strength, hemianæsthesia, perhaps, is "found." Later she returns to complain of muscular weakness of the same side of her body.

The majority of paralyses follow traumatism,

and as men are more exposed to injury than are women, it is not surprising that this symptom occurs far more commonly in males. In reference to traumatism, one should bear in mind the fact that the "accidents" of hysteria are dependent upon the psychic effects of an injury, and not upon its physical consequences. No matter how severe the traumatism may have been it is only the idea of injury that eventuates in *hysteric* paralysis and other symptoms of the disease. As a matter of fact, in cases of hysteric paralysis following injury it is not at all unusual to find that the injury was but a trivial one. Unless deceived by the apparent serious import of the symptom the layman is inclined to attribute such cases to what is popularly termed a vivid imagination, or, if the case happens to be one in which a law suit is being instituted, the interpretation is more contemptuous.

Besides those patients with hysteric paralyses originating entirely from the psychic effects of an injury not infrequently actual, but transitory, paralysis due to traumatism, or pseudo-paralysis of painful injuries, may become elaborated and fixed as hysteric paralysis that continues after the organic cause has subsided. Thus, paralysis due to traumatic neuritis, or pseudo-paralysis consequent upon the pain of a sprain, may be the source of hysteric paralysis.

Two cases which have been reported by

Prince illustrate very nicely the genesis of paralysis from negligible injuries: During the Civil War a round shot, after having knocked a tin dipper from the hand of a soldier, passed between his elbow and his side. The wind of the shot threw him to the ground. Upon regaining consciousness, twenty-four hours later, he presented the same symptoms, he declared, as when Prince examined him—decided, but not absolute, paralysis and profound anæsthesia of the whole left upper extremity. The other patient had been struck and rendered unconscious by some large missile during a battle of the Civil War. His blanket roll had so broken the force of the blow that, at the time, the only sign of injury was ecchymosis below the left shoulder; yet incomplete hemiplegia and hemianæsthesia had developed and persisted. (Amer. Jour. of the Med. Sciences, July, 1892.)

During intense excitement a normal individual may feel that his legs are giving away beneath him. Popularly this fact is well known; hence the expression "to feel weak in the knees." Given a hysteric person who has sustained some emotional shock during which, among other reactions, this feeling of weakness occurred, what is more natural than the development of hysteric paraplegia as a souvenir of the incident? It is the evolution of the physical symptoms of hysteria from psychic stresses that led Freud to compare them with the monuments

which are erected to commemorate important historical events.

The idea of paraplegia may owe its origin to the effects of illness. Anyone who has been confined to bed several weeks with some severe illness is more or less completely unable to walk, or to stand alone, when he first rises from bed. This actual weakness of the lower extremities may continue several days or more, and, in a hysteric, it may persist solely as a fixed and elaborated symptom of hysteria. Indeed, it is from just such conditions that many of the manifestations are evolved; for all have some definite exciting cause. Our inability to find the precise reason for each symptom that every patient presents is only evidence that our analyses are incomplete, or defective, and not that such symptoms "just happened."

A beautiful example of the manner in which an emotional shock—the idea of injury in this case—alone can bring about paralysis is mentioned by Janet: A man had descended upon the running board of a railroad coach in the attempt, while the train was in motion, to change compartments. As the train was about to enter a tunnel, while he was still on the running board, the idea occurred to him that his left side would be crushed. The terror aroused by this thought caused him to faint, and he fell back into the compartment. Notwithstanding that physically he was uninjured, left hemi-

plegia developed. (Major Symptoms of Hysteria, p. 141.)

Whatever the cause, paralysis and other "accidents" of hysteria may not appear at once: there may be an intervening period of autosuggestion which may last hours or days, and even weeks. During the interval the patient may not be consciously brooding over the memories of the injury, for these memories may have been dissociated from consciousness. Later some entirely different event may arouse them into pathologic activity with the consequent production of a paralysis, an amaurosis, or some other manifestation. So there may occur what may be termed a delayed reaction, or a reaction by substitution. Instead, then, of hysteric paralysis being evolved from an injury which might be expected to produce this symptom, the patient may develop, for example, amaurosis because the mental shock set into activity the dissociated memories of some other experience whose logical result, amaurosis, remained latent.

The diminution of muscular force which is met with so commonly during the examination of hysteric patients cannot be regarded as incomplete paralysis for the reason that it is due entirely to the interference of attention with the muscular efforts which are being tested. Dynamometric investigation of hysterics shows that the gripping force apparently is greatly

impaired in over 90% of the cases. But when these same patients shake hands, or when they lift objects which require considerable gripping force, one sees at once that the dynamometric readings cannot be considered indicative of the amount of strength which the patients really possess.

In its distribution hysteric paralysis may affect a single muscle, or group of muscles, or it may assume the form of a monoplegia, a hemiplegia, or a paraplegia. Though the paralysis may be complete cases are rarely observed in which the patient is totally unable to use the affected part. Except its tendency to be associated with anæsthesia, hysteric paralysis frequently occurs as an isolated manifestation. Particularly is this true when the symptom is consequent upon traumatism, and when it occurs in males.

In those confirmed cases of the hysteric habit, or of hysteric malingering in which the disease has become but a useful means to an end, or in which the patient appears to take great pleasure in her numerous ailments and who occupies herself agreeably in going from one physician to another or from this clinic to that, hysteric paralysis may be only one symptom of an extensive repertoire. In contradistinction to this type of patient is the manner in which paralysis is regarded by the patient with pure hysteria. Such a patient is often quite contented to per-

mit her paralysis to continue undisturbed, and the interference of a physician may be looked upon with indifference, or it may provoke active antagonism. She tranquilly ignores what ordinarily is considered to be a grave symptom, and whether merely inconvenienced, or actually incapacitated, she is totally unconcerned about her condition.

Inasmuch as hysteric paralysis is the consequence of dissociation of the ability consciously to evoke motor activity in the affected part there should not be any interference with the performance of automatic or subconscious acts. Accordingly, not only should we expect, but actually we find, that the paralysis disappears during sleep, hysteric seizures, and, in fact, whenever the usual state of consciousness of the patient is in abeyance. The somnambulistic attacks of one of Janet's cases demonstrate the manner in which paralysis disappears during the course of subconscious states. By reason of hysteric paraplegia this patient was confined to bed. At night, however, he jumped out of bed, and, while holding his pillow in the belief that it was his child whom he was saving from the hands of his mother-in-law, he ran out of the room and into the court-yard. Then he climbed to the roof of the hospital. Upon being awakened both of his legs again became paralyzed, and it was necessary to carry him back to his bed.

As the usual state of consciousness of a patient is in abeyance during profound hypnosis one should be able, through the agency of hypnotic suggestion, to secure free use of muscles which are the seat of hysteric paralysis. By this means not only can one demonstrate the psychic nature of hysteric paralysis and therefore differentiate the affection from one which is organic, but it is possible also to remove the symptom.

In most cases the diagnosis is a simple matter if one studies both the symptom and the patient. In the absence of positive differentiating features pertaining to the paralysis itself, the discovery of other evidences of hysteria cannot be used as the basis for a diagnosis because of the fre quency with which hysteria and organic disease coexist. The character of the symptom and the absence of qualities essential to organic paralysis alone must be considered.

Like the distribution of psychic anæsthesias the muscles involved in hysteric paralysis may not correspond to nerve supply. Except the inconsiderable wasting of disuse that may occur in long standing cases there is not any true atrophy of the affected part, nor are there any changes in the electrical reactions. In cases of hysteric hemiplegia the face is rarely involved. On the basis of Briquet's 60 cases of hemiplegia examined before 1859 considerable stress has been placed upon the statement that the left side is affected three times as frequently as the right.

Ernest Jones, however, found that the right side was the seat of hemiplegia in 54.2% of 277 cases reported since 1880. (Rev. Neurol, Mar. 15, 1908.)

The gait of hysteric hemiplegia differs greatly from that of organic disease. When organic the patient swings the paralyzed leg forward so that the anterior inner surface of the foot describes an arc on the floor; the hysteric drags her paralyzed limb behind her just as one would expect in consideration of her conception of paralysis and her lack of knowledge of how a case of organic hemiplegia really should walk. The organic hemiplegic wears out the inner aspect of the toe of his shoe while the hysteric's shoe is more apt to be damaged most at the point.

When we exert resistance to the muscular efforts of a patient with incomplete hysteric paralysis, and when we study the manner in which the non paralyzed hysteric grips the dynamometer, we find notwithstanding that the patient appears to be, and is, exerting considerable strength, and that he fairly trembles in his efforts to produce still more forcible muscular contraction, yet the results are almost nil. The explanation of this apparent diminution of strength, and of the seeming disproportion between muscular effort and its effects, lies in the fact that the contraction of the muscles which are being tested is almost neutralized by similar activity of their opponents.

Of the utmost diagnostic importance is the condition of the tendon reflexes. Regardless of the presence or absence of paralysis the patellar reflexes are slightly, but truly, exaggerated in almost all cases of hysteria. Occasionally the reflex may appear to be greatly exaggerated, but as this exaggeration usually resembles an intentional muscular action it cannot be mistaken for that caused by organic spastic paralysis. On the other hand, the knee-jerks may be greatly inhibited, or even caused to appear to be lost when the patient concentrates her attention upon the tests and contracts the muscles of the thigh. Those who have attempted to demonstrate a normal knee-jerk in students have encountered this difficulty. Except these known variations of the patellar reflex it may be asserted that absolute loss, or that true increase to an extent that is observed in upper motor neuron type of paralysis, cannot occur, in a typical manner as the result of uncomplicated hysteria. Momentary loss of the knee-jerks, however, occurred regularly, during the attacks of hysteric petit mal of a patient reported by Putnam. (Personal Experience with Freud's Psychoanalytic Method, Jour. of Nervous and Mental Diseases, 1910, p 670.)

It is stated that 2% of presumably normal individuals do not possess knee-jerks. Now, if hysteria developed in any of these it might be thought that the absence of the reflex was due to hysteria.

In uncomplicated hysteria it is not unusual to elicit a pseudo-clonus, which, unlike true clonus, is not sustained and is semi-voluntary. In exceptional instances typical ankle clonus may occur, but I have never been able to discover this phenomenon among any of my cases until recently. The patient was a major hysteric who had been under observation at intervals for four years. Lately the usual type of hysteric hemiplegia developed and there could not be any doubt concerning the absence of any organic lesion. During one examination a true organic type of sustained ankle clonus was found on the paralyzed side, but there were no other of the physical signs of organic disease. The following day, while demonstrating the patient before a section of students, it was impossible to elicit even the faintest tendency towards clonus.

In a case of hysteric convulsive seizures reported by Heard and Diller the patient had bilateral sustained clonus which disappeared after two weeks. The patient completely recovered under anti-hysterical treatment. The clonus was believed to be entirely hysteric in origin, and in commenting on the case the opinion is expressed that ankle clonus is not necessarily indicative of organic disease; that it can develop as a manifestation of hysteria. (Ankle Clonus in a Case of Major Hysteria, Jour. of Nervous and Mental Disease, 1910, p. 239.)

Like the knee-jerks, the Achilles reflex cannot

be abolished by hysteria, and, excluding doubtful reactions to plantar irritation, it is improbable, too, that a typical Babinski reaction can be caused by the disease.

As many cases of multiple sclerosis early in their course have been mistaken for hysteria, and as clonus, exaggerated knee-jerks, and the Babinski sign are common symptoms of this disease, it may happen that true organic changes in the reflexes may be discovered in cases of what appear to be hysteria but which, in reality, as later events show, are cases of multiple sclerosis.

There are other organic diseases, too, which may be overlooked, and whose alterations in the reflexes may be ascribed to what is a superimposed hysteria.

Probably most authorities believe that the reflex changes typical of organic disease cannot be produced by hysteria. On the other hand, well attested cases of supposedly uncomplicated hysteria have been reported by such observers as Nonne, Marie, Déjèrine, Van Gehuchten, etc., in which the Babinski reflex, clonus, and absent or exaggerated patellar and Achilles reflexes have been found. Even if, as these authorities contend, such alterations of the reflexes rarely can occur as manifestations solely of hysteria, the discovery of these changes in a case of the disease argues most strongly for the coexistence of organic nervous disease.

Of interest are the results of Knapp's inquiry into the condition of the reflexes in 100 cases of hysteria presenting a difference in sensibility in the lateral halves of the body. He found some exaggeration of the tendon reflexes in 86 cases and spurious ankle clonus in 7 cases. Of 57 cases presenting unequal exaggeration of the tendon reflexes the increase was found twice as often on the anæsthetic side as on the opposite one. True ankle clonus, the Babinski sign, and absence of the patellar reflexes were not observed in any of the cases. Unlike the tendon reflexes impairment, or loss, of the skin reflexes of an anæsthetic part is not uncommon. In 24 cases out of 51 Knapp found the abdominal reflex to be involved in this manner. (Jour. of Nerv. and Ment. Dis., 1910, p. 93.)

A valuable means of differentiation between organic and hysteric hemiplegia is afforded by Hoover's complemental opposition sign. (Jour of the A. M. A., 1908, 2, 746.) When a normal individual who is lying upon his back elevates one extended lower extremity the downward pressure of the opposite heel is increased, and when one extended lower extremity is pressed down with some force, the downward pressure of the contralateral limb is lessened. In cases of organic hemiplegia attempts to elevate the paralyzed limb result in increased downward pressure of the opposite heel, even though the paralyzed extremity does not move. Also, eleva-

tion of the extended normal limb is accompanied by an amount of contralateral downward pressure that is proportionate to the degree of paralysis. If the hemiplegia is hysteric in origin the attempt to raise the paralyzed limb does not increase the downward pressure of the opposite heel, while elevation of the normal limb does produce complemental opposition of the paralyzed side. In the same manner the complemental opposition sign may be elicited by having the patient press the extremity down upon the surface upon which he is lying, instead of raising, or attempting to raise, the limb.

In testing patients with moderate organic ataxia (Jour. of the A. M. A., 1909, 1, 1234.) Hoover found that the amount of complemental opposition is increased whether the patient's eyes are open or closed. But if the ataxia is extreme complemental opposition is exaggerated when the patient's eyes are open; while it disappears entirely if his eyes are closed; the patient then reacting like the hysteric, or the malingerer.

As cited by Hoover, Lhermitte found that when paralysis of one lower extremity has been induced by means of hypnotic suggestion the variations of complemental opposition are the same as those observed in hysteria and malingering. In experimenting with hypnotic subjects I have verified this when the suggested paralysis was complete; otherwise, complemental opposition may be the same as that observed with organic

paralysis. The same holds true of hysteria. In either hysteric or hypnotic hemiplegia the absence of complemental opposition depends entirely upon the fact that the patient is so firmly convinced of the reality of her paralysis that she really does not attempt to raise the limb.

When hysteric hemiplegia is spastic then complemental opposition occurs, but the amount exhibited when the patient *attempts* to lift the paralyzed limb is not as great as when the normal one is elevated. The same result is obtained when testing subjects in whom the condition has been produced by suggestion. The explanation is obvious. Hysteric or hypnotic spastic paralysis depends upon a more or less constant rigidity, and when the patient strives voluntarily to use one group of muscles there is a corresponding increase in the amount of contraction of the opposing group with consequent increase in rigidity. Now, if the patient attempts to elevate the paralyzed limb the opposing group of muscles contract sufficiently to prevent the limb from being raised but not enough to maintain the same amount of downward pressure that had been produced by the weight of the limb itself. This result would be expected because the patient's conception of her paralysis merely prevents elevation of the limb and variations in the downward pressure due to its weight do not enter into her subconscious calculations. Consequently, complemental opposition of the

other extremity occurs to a degree sufficient to counter-balance this decrease in the weight of the affected extremity.

In the examination of modifications of complemental opposition Zenner (Jour. of the A. M. A., 1908, 2, 1309,) avers that it is easier to detect contraction of the semitendinosus, the semimembranosus, and the biceps muscles than it is to appreciate variations of the downward pressure of the heel.

Another sign which is dependent upon complemental opposition has been described by Raimiste (Rev. Neurol., Feb. 1909.) While the patient, with both lower extremities abducted, is lying upon a smooth, firm surface the physician requests him to draw, but not to lift, the normal extremity over towards the paralyzed one, and, at the same time, the physician forcibly opposes the movement. If the hemiplegia is organic, abduction of the paralyzed limb occurs. In like manner abduction of the paralyzed member takes place when both lower extremities are in apposition and the normal one forcibly is prevented from being separated from its fellow.

A type of progressive muscular atrophy beginning in the iliopsoas muscles has been described by Thomas Buzzard, who points out the difficulty of differentiating the condition from some kinds of hysteric paraplegia. (On the Simulation of Hysteria by Organic Disease of the Nervous System, 1891, p. 5.) In cases

presenting this unusual variety of onset of progressive muscular atrophy the patient complains of weakness in the lower extremities, together with difficulty in ascending stairs, in walking uphill, or in rising from a chair, yet, if the disease is confined to the iliopsoas muscles, examination shows that the reflexes and electrical reactions which are capable of being elicited are normal, and that not any atrophy is in evidence. The diagnosis in such cases depends upon the character of the motor disturbance and upon the absence of signs of hysteria. If the disease has spread to the muscles of the thigh then the loss of the patellar reflexes, changes in the electrical reactions, and the appearance of atrophy, make the recognition of the disease an easy matter.

A paralysis which is accidentally suggested upon a patient owes its continued existence to the patient's belief in his inability to activate the affected muscles. Consequently, if he can be induced to believe that paralysis no longer exists, the symptom will disappear at once, or if he can be convinced that some form of treatment is going to "cure" the paralysis, then the condition should vanish either suddenly or gradually. On the other hand, if the patient does not receive any treatment the paralysis will continue until some accidental occurrence causes him to recover the use of the affected muscles either by inducing him to expect recov-

ery, or suddenly by arousing the conviction that the paralysis no longer exists.

It is only by reason of the state of expectancy which is induced in a devout hysteric that sincere faith in the miraculous curative virtues of a relic is capable of producing immediate cure of paralysis, amaurosis, etc. Each shrine has its quota of crutches which were discarded by cases of hysteric paralysis that were cured. For the same reason any worthless patent medicine, electric belts, tractors, magnets, and kindred "therapeutic" agents will be effectual, providing that the patient has sufficient faith in the means. With most of the monosymptomatic cases it is a question only of combatting one belief with another, and the stronger one wins.

Recent hysteric paralysis usually is very amenable to treatment. On the contrary, long continued paralysis tends indefinitely to persist, regardless of treatment. Hemiplegia and two instances of brachial monoplegia had continued for 29, 28, and 30 years respectively, in the three old soldiers with hysteric paralysis reported by Prince.

Systematized Paralysis. Paralysis is systematized when it exists only for the conscious performance of certain acts; other forms of conscious activity with the same groups of muscles not being impaired. Through the agency of hypnotic suggestion not only can we

produce ordinary psychic paralysis, but systematized paralysis also can be created; and either of such types present all the characteristics of those due to hysteria. If we tell a hypnotized subject that he is unable to walk and then by means of post hypnotic suggestion cause the resulting condition to persist after the hypnotic state has been removed, different types of astasia-abasia can be evolved which cannot be differentiated from the varieties met with in hysteria. Let us consider, then, that hysteric paralysis and systematized paralysis are the consequence of dissociation from consciousness either of all forms, or of particular kinds of motor functions in a part or parts, and that this dissociation is affected by autosuggestion.

Astasia-Abasia. In the affection known as astasia-abasia the patient is unable normally to stand or to walk without, however, any other kinds of activity of the lower extremities being impaired. Total inability to walk is occasioned when the condition is highly developed. More frequently some peculiar type of gait is possible. Except as the result of abnormal ideation astasia-abasia would be impossible. It is only a psychopathic state which is capable of producing inability to walk in a patient whose muscles are not paralyzed or ataxic and who, perhaps, is able to run and to dance.

To illustrate a mode of genesis of astasia-abasia, and at the same time to demonstrate the

importance of autosuggestion in the production of symptoms of hysteria, there is no better instance than that afforded by Prince's B. C. A. case of dissociation of personality. (Jour. of Abnormal Psych., vol. 3, p. 331.) As personality C, the patient had witnessed the peculiar gait of a patient with astasia-abasia. The co-conscious personality B, (what might be termed an emancipated subconsciousness) became interested in the condition, and later, while thinking deeply on the subject and wondering how it would feel if she were afflicted with the same infirmity, personality C became much excited and the condition developed.

Like paraplegia, astasia-abasia may develop from the transitory difficulty in standing, or walking, that a hysteric may experience after having been confined to bed for a number of days by some acute illness.

Mutism. Hysteric mutism is the most interesting of the manifestations due to systematized paralysis. It may be looked upon as a systematized paralysis because the articulatory muscles may be affected only for speech. The symptom is decidedly more frequent in males than in females, and often it occurs as a more or less isolated physical manifestation. As noted in the section devoted to audition, hysteric mutism may be associated with psychic deafness. Having heard of deaf and dumb asylums and of the deaf and dumb the two sen-

sory deficits are rather intimately associated in the minds of laymen. As a consequence of this conceptual relationship a hysteric layman who becomes deaf may also develop mutism, or vice versa. Another mode of genesis is by means of fixation and elaboration of an aphonia which was symptomatic of some transient local inflammation.

Temporary disturbance, or even total suppression, of speech is a normal accompaniment of intense excitement. An angry man often stutters out his rage, or is rendered speechless for a brief period. The tendency of hysteria to appropriate whatever suggests itself during periods of emotional excess, and to elaborate normal reactions, may eventuate in the development of mutism, or of other speech defects. from just such a transitory difficulty. For example, a patient reported by O. S. Hubbard, (Jour. of the Kansas Med. Soc., 1908, p. 451) had become angry and much excited. Mutism developed the evening of the same day; several hours after he had expressed the opinion that soon he would be unable to talk. By means of suggestion, bitter medicine, and massage of the neck, speech was caused to return the following day.

Like other phenomena of the disease the symptom may be paroxysmal or constant; paroxysms being aroused by association of ideas. The attacks of mutism occurring in one

patient were induced only by quarrels, and it was found that some few years ago the initial disturbance followed a quarrel with her brother. In her early childhood another patient had fallen from a tree with the consequence that a prolonged attack of mutism occurred. During the succeeding twenty-five or thirty years she had been subject to paroxysms of mutism that occurred about two or three times a year and which continued for a few weeks; the longest having lasted three months. Each of the attacks followed some exciting incident, and the mutism was absolute—she was unable to talk, whisper, or even to whistle. Being accustomed to the seizures she neither feared nor worried about them.

An account of an interesting case of mutism that occurred during the seventeenth century was discovered by Jahnel in an old book. Following a narrow escape from drowning the patient, aet. 10, developed complete mutism. For fifty years he was able to speak only from noon until one o'clock, and even though no clock was at hand he was accurate to a minute in his determination of these hours. Except two or three days before his death only twice was he known to speak at other hours, and on both of these occasions he was ill from fever. (Nerologisches Centralblatt, June 1, 1908, p. 512.)

The psychic effects of traumatism and the occasional resistance of hysterical symptoms to treatment is shown in a case reported by J. K. Mitchell. (Jour. of Nerv. and Ment. Dis., 1907, p. 253.) In a male of twenty-two years absolute mutism succeeded a stuporous condition which had been induced by the psychic stress occasioned by contact with a live wire, though no other physical effects than a small brush burn of the face were discovered. Once during the course of the mutism the patient was known unconsciously to have uttered a few words, and, on another occasion, he talked in his sleep. Local faradism, injection of strychnine, suggestion during a state of light hypnosis, general anæsthesia, and attempts at vocal re-education were unsuccessful in causing the return of his speech. Fifteen months after the onset of mutism recovery occurred spontaneously during a theatrical crisis.

On recovering consciousness, after having been injured, one of Bailey's patients had mutism in addition to other major symptoms of hysteria. Many months later he was much alarmed, after a second accident, to find that he was talking to himself—the mutism had disappeared. The diagnosis, traumatic hysteria, was considered incontestable. (Diseases of the Nervous System Resulting from Accident and Injury, 1906, p. 448.)

In the normal person a nightmare usually

causes a sense of depression during the following day. In our relations with psychopathic individuals it is not at all unusual to observe that incidents of dreams have been carried over into the waking state. One of Prince's cases serves nicely to illustrate this mode of genesis of symptoms. (Jour. of Abnormal Psychology, vol. 5, p. 139.) During a terrifying dream the patient tried to call to her mother, and, as usually is the case during dreams, she was unable to speak. After waking she could only whisper, and the complete aphonia persisted until relieved by suggestion.

Hysteric mutism may be interpreted as a massive dissociation from consciousness of the faculty of vocal expression of language. When mutism is systematized it may be dependent either upon inability to articulate, though internal language is unaffected, or upon dissociation of the memories of certain kinds of words. The defect in the latter instance is more properly classified as a systematized amnesia.

Like most other symptoms of the disease all the varieties of mutism readily can be reproduced by means of suggestion. And whether the affection be caused by hysteria or by intentional suggestion, it is the product of a fixed idea. The patient sincerely believes that he is unable to speak, and, therefore, he does not voluntarily try to do so. Or, if at the instigation of others he does attempt to speak, his

efforts are vitiated by his conviction that they will fail. In other words, no matter how earnest the patient may seem, his attempts to speak necessarily must fail by reason of the autosuggestion of failure that is implied by his lack of conviction in their success. Any method, then, which is capable of arousing the patient's belief in his ability to speak should be successful in the treatment of this condition, and it is this fact which enables the believer in Christian Science, or in faith cure, or in patent medicine, to be cured by these supposed therapeutic agents. The fact that they do cure justifies the use of the principle upon which they are based; namely, suggestion.

Besides mutism numerous speech defects may occur in hysteria. Among these loss of the voice with preservation of whispered speech—aphonia—probably is the most common. Different kinds of stammering may occur, and even the scanning speech of multiple sclerosis may be mimicked. In one rather unusual case the patient separated each word and each syllable by a short quick inspiration so that his speech resembled that taught to patients as one of the features of a certain method of treatment of stammering.

Mutism is rare, if it occurs at all, in psychasthenia; but the majority of inorganic speech disturbances other than mutism probably are symptomatic of this psychoneurosis. Ordinary stam-

mering and other spasmodic vocal affections of like nature almost invariably are due to psychasthenic tics affecting speech, and their mechanism differs not all from that of other tics, or "habit spasms."

Contractures. When a muscle, or a group of muscles, develops a state of paroxysmal or constant contraction the resulting condition is known as a contracture. Almost invariably contractures are the effect of the psychic stress occasioned by some traumatism; severe, trivial, or suppositious. This symptom is not frequent for the reason that its causes are also the causes of paralysis, and as patients possess greater knowledge of paralysis than of contractures the former are more apt to occur.

Like the genesis of paralysis it is not the injury itself which causes the symptom, but it is the *idea* of the injury. In fact, a contracture may appear solely as the result of belief that an injury has been received when, in reality, none had been inflicted. Florence K., for example, believed that her finger had been kicked. Upon questioning her it was found that she was not sure that her hand actually had been struck. Besides, not any evidence of injury could be discovered. Immediately after the exposure to injury she experienced severe pain, and the little finger became contractured into the palm. The attempts of other physicians forcibly to reduce the contracture had failed because of the in-

tense emotional reaction provoked by such procedures.

On the third day my examination showed that even when moderate efforts were made passively to extend the finger the exaggerated manifestations of pain became excessive, and the more forcible the attempt the more pronounced became the contraction of the muscles which were responsible for the condition. The whole hand was cold, perspired freely and presented a decided tremor even before any manipulation was attempted. Having hypnotized the patient the finger was straightened without difficulty and without causing any "pain." When the hypnotic state was dispelled, however, the contracture reappeared in spite of previous post hypnotic suggestions which had as their end the prevention of this occurrence. Accordingly, she was hypnotized again, the finger straightened, and a splint applied. When "awakened" she expressed surprise at finding her finger extended. After about fifteen minutes the splint was removed and she had no further trouble either from pain or from abnormal muscular contraction.

Contractures may occur in any part of the body, and, what indeed is remarkable, even involuntary muscles may be affected. Except some of the contractures produced by involuntary muscles all those of hysteria can be duplicated by means of suggestion.

When originating from traumatism the location of a contracture depends upon the site of injury, and the pain which is often found in association either is entirely psychic, as in the case just mentioned, or it is an elaboration of actual pain. Naturally a patient would believe that any injury which is severe enough to result in a contracture should be provocative of considerable pain. When pain, then, is present its severity is apt to be out of proportion to the amount of surgical injury.

The recognition of hysteric contractures is usually not difficult. When the affection has existed for a long time and when the associated symptoms are misleading it is quite possible, however, to attribute the manifestations to some organic disease. In fact, even as great a clinician as Osler speaks of having repeatedly demonstrated as a typical example of lateral sclerosis a case of hysteric contracture of paraplegic form. (Practice of Medicine, 1902, p. 1114.)

When the symptom is due to hysteria the tendon reflexes are not disturbed as in organic nervous diseases, and the electrical reactions more nearly resemble the normal. If the flexion or extension is not complete examination shows that the contraction of the muscles responsible for the condition is counterbalanced by contraction of their opponents. Now suppose we examine a case of flexion of the forearm. When

we attempt forcibly to extend the forearm the biceps is felt to contract energetically and the counterbalancing contraction of the triceps disappears as our efforts at extension render this no longer necessary. On the other hand, if we try to increase the amount of flexion of the forearm we find that the biceps relaxes and the triceps becomes tense.

If a whole extremity is contractured as a result of organic disease it is possible to extend more or less completely one part at a time, but the whole limb cannot be extended at the same time. The amount of extension secured in this manner is augmented when the flexion of neighboring parts is increased. These results cannot be secured with hysteric contractures.

Osseous deformities and joint changes ordinarily do not develop in long standing cases of hysteric contracture. With patients in whom the condition is not highly organized the underlying muscular contraction tends to subside when the patient's attention is distracted, and the contracture may disappear during sleep, general anæsthesia, the hypnotic state, and during somnambulistic or convulsive attacks.

The duration of a contracture is variable. Like other symptoms it has been known to persist many years.

In the treatment of contracture quite commonly advantage is taken of the relaxing effects

of etherization in order to reduce the deformity and to splint the affected part. Having convinced the patient that reduction has been effected the contracture does not tend to recur, but it would be preferable to leave the splints in place for several days, or more, according to the duration and the severity of the affection. This means of treatment is to be recommended only as a last resource. Not only is etherization disagreeable and not entirely devoid of danger, but it may serve as the source of various other manifestations of hysteria. Whether carried to the extent of actual hypnosis or not, suggestion should be quite as effectual, and without any of the disadvantages and dangers of general anæsthesia. In order to obtain the greatest amount of benefit from suggestion it should be reinforced—disguised—by the employment of various other agents, such as electricity and massage.

Motor Disorders of the Eye. Among the most interesting and the most incomprehensible of the special types of contractures and paralyses are some of those occurring in the eye. It is impossible, however, to describe each of the many forms of ocular disturbances in a general work, so brief mention is made only of a few.

Hysteric contracture of the orbicularis produces unilateral or bilateral drooping of the lids which should not be mistaken for organic ptosis.

Continual blinking of the lids, blepharoclonus, is less frequent in hysteria than in psychasthenia. Occasionally one meets with hysteric patients who seem unable to displace the eyeballs in any direction, but this apparent ophthalmoplegia externa usually can be demonstrated to be entirely subjective. Frequently the condition is apparent only during examination of the ocular muscles—it is suggested upon the patient. Such "paralyses" usually disappear when the patient's attention is distracted from the eyes.

Four years after having sustained a fracture of the skull and of the second cervical vertebra a male patient developed cerebro-spinal meningitis. (N. Y. Med. Jour., Dec. 5, 1908.) During this illness there appeared indisputable organic ophthalmoplegia interna and externa which continued for many weeks after his recovery. Subsequently it was noticed that he was unable to move his eyes more than one-fourth of an inch in any direction, and bilateral ptosis was conspicuous. That the former organic ophthalmoparesis persisted as a purely hysteric manifestation was made apparent by the disappearance of the paretic symptoms whenever the patient's attention was distracted.

Conjugate deviation of the eyes and apparent paralysis of associated ocular muscles are readily understood, but it is difficult, indeed, to comprehend how hysteria is capable of causing paralysis of individual ocular muscles—

of producing conditions which one cannot voluntarily reproduce, or which cannot be duplicated by hypnotic suggestion. Nevertheless, quite a few cases have been reported in which such paralyses have occurred seemingly as manifestations of hysteria. Onuf satisfactorily accounted for a case of hysteric spastic convergence and other ocular symptoms as having been due to the elaboration of visual symptoms produced by myopic astigmatism. (Jour. of Abnormal Psychol., vol. 2, p. 155.) Probably it is only our own ignorance which prevents us explaining on psychic grounds all the different hysteric affections of the ocular muscles.

As cerebral syphilis often causes isolated ocular palsies that may not be associated with other obvious evidences of the disease, and as the same may occur infrequently with other organic nervous diseases, one should exercise the greatest care before ascribing these significant affections to hysteria.

Quite commonly the pupils are a little larger than usual, and, in rare cases, pronounced mydriasis with loss of the light reflex has been noted. Such conditions are thought to be due to contraction of the dilator muscle of the iris. Redlich (Deutsche Med. Wochenschr., 1908, p. 313,) reported a case in which widely dilated pupils and loss of reaction to light were present only during hysteric seizures that did not occasion loss of consciousness, and which were

characterized by crying out, and muscular activity. The same pupillary phenomena developed when the patient was induced voluntarily to reproduce the attacks, provided that the muscular contractions were forcible and persistent. He believed that the contraction of the muscles of the neck so irritated the cervical sympathetic as to produce mydriasis, and that in this case the condition was but an exaggeration of the dilatation which normally occurs during strong muscular efforts.

During the attacks of the case of hysteric petit mal reported by Putnam. and which was mentioned in reference to loss of the patellar reflexes, the patient regularly lost the pupillary light reflex for several minutes.

Polyopia and monocular diplopia are so readily explained by the assumption that the multiplication of images is entirely psychic that the involved theory of unequal refraction of the lens due to ciliary contractures need not be considered except, perhaps, in rare instances. Prince's patient with monocular polyopia saw such a large number of images that he had difficulty in counting them. (Amer. Jour. of the Med. Sciences, Feb., 1897.)

Motor Trepidation. During the examination of nervous patients often a rapid tremor of small amplitude is noticed when the patient is directed to hold out her hands with the fingers extended. Such a tremor, one

which might be accurately designated an attention tremor, is dependent upon the familiar effects of conscious attention upon the performance of an act, and it is found sometimes even in individuals who do not seem to be nervous. More important are the slow tremors of large amplitude that exist independently of examination. These tremors may be localized or general, and they may appear only when the part is at rest or only during use of the member.

The differentiation of the intention tremor of multiple sclerosis from that which may occur as a symptom of hysteria may be difficult when other manifestations are present which are common to either disease. Less frequently, in addition to rest tremor other symptoms of paralysis agitans may be mimicked. Thus a patient reported by Gaussel developed by psychic contagion all of the manifestations presented by a patient with paralysis agitans who occupied the next bed. (Gazette des Hôpitaux, Nov. 7, 1908.)

The possible causes of hysteric tremor are innumerable. Generally the different kinds of motor agitation are exaggerated but persistent emotional reactions which are elaborated from ones which were normal. While committing a reprehensible act the arm, for instance, which is employed may tremble as normally it might in consequence of emotional excitement. By

autosuggestion this normal trembling may become fixed upon the patient. When originated in this manner it is a symbol of some repulsive act whose memories, because of their unpleasant nature, the patient has voluntarily suppressed from consciousness.

Another mode in which a localized tremor may be generated is that in which the patient's attention is concentrated upon the activity of some one member while a general trembling is present as the result of some emotional disturbance. While shaving a customer a hysteric barber became excited, and the consequent trembling resulted in the infliction of a severe incision. As his livelihood depended upon the steadiness of his hand the barber worried about his mishap. If the accident were repeated he might lose his place. With this foundation of expectant attention what might be expected actually appeared; whenever he attempted to shave anyone, thought about doing so, or even fixed his attention upon his hand, decided tremor developed in the hand which he used in shaving.

The surgeon often notices severe trembling of injured limbs. If the patient happens to be a hysteric fixation of this otherwise transitory symptom is almost inevitable. Not infrequently the irregular movements of chorea are continued indefinitely through the agency of associated hysteria.

The effect of attention upon hysteric tremors is variable. Distraction of the patient's attention may either increase or decrease the intensity of the tremor, and concentration of attention upon the affected part may also have the same varying effects. In psychasthenia, however, a tremor always is diminished or caused to disappear during distraction of the patient's attention.

Rhythmical choreas are characterized by rhythmical, purposive, involuntary movements which do not resemble the aimless jerking of chorea; neither are they like the vibrations of a tremor. Unlike psychasthenic choreiform ties the rhythmical choreas of hysteria do not tend to disappear during distraction of the patient's attention because the whole mechanism is subconscious. The agitation may be paroxysmal or more or less constant. In the case of the former each paroxysm is excited by a stimulus which, by association of ideas, provokes into activity the dissociated system. The movements may originate from dissociated ideas concerning the occupation of the patient, or they may be representations of some disagreeable experience.

Hysteric tremors and rhythmical choreas may be looked upon as rudimentary convulsions. Sometimes they are residues of former convulsive seizures. Emma F., for instance, had been shot in both arms, and, at the same time, she had received an abrasion of the forehead. Imme-

diately she became unconscious and a convulsive seizure appeared—the first she had ever experienced. Following this attack she had others during which she screamed and struggled. After these crises had spontaneously disappeared general trembling and choreiform movements developed and continued for seven years. The only way in which she could prevent her head from participating in this constant motor agitation was by means of holding it firmly with her hands. Furthermore, she had suffered from attacks of what appeared to be typical migraine since she was injured.

Here, then, is a case in which severe general trembling originated from what probably were defensive movements of former somnambulistic attacks, and these seizures, in turn, represented her terror and resistance when she was shot. The original pain produced by the abrasion of her forehead probably served as the source of her "migraine." The tremor, choreiform movements, and headaches were readily controlled by suggestion during a state of deep hypnosis, and, after the third treatment, her symptoms entirely disappeared.

The majority of habit spasm or tics are symptomatic of psychasthenia. The psychasthenic tic differs from the rhythmical choreas of hysteria in that to a great extent it is voluntary. The patient is obsessed with the idea to tique, and temporarily to relieve the mental

discomfort due to the impulsion he voluntarily indulges in the spasmodic muscular contraction. When his attention is distracted his tic is less frequent or it disappears, or, to express the condition more correctly, he does not have the tendency to tique when his attention is distracted.

The imperative ideation which causes the psychasthenic tic is disposed to be most insistent when the spasms are least desired. When in the company of friends, and more particularly strangers, the patient, always embarrassed and self-conscious, fears that he will be afflicted with his tic, and, being ashamed of it, he apprehends having remarks made about his condition. The consequent state of expectant attention naturally results in the production, or the aggravation, of the tic.

The psychasthenic is able more or less successfully to resist the impulse to tique until he believes himself to be unobserved. Then he indulges in the relief afforded by a number of quickly repeated spasms which appear, to the chance observer, as if the impulses had been accumulating, or as if the tiquer were attempting to insure a succeeding interval of respite by reason of excessive indulgence. On the other hand, the hysteric is not embarrassed by her tic, and, in fact, she may not even be aware of the muscular contractions which are taking place independently of any conscious impulsion.

CHAPTER VII

*Psycholepsy**

THE failure of the Salpêtrière school, during Charcot's time, to accede the contentions of Berheim, to the effect that suggestion plays a most important role in the genesis of symptoms of hysteria, resulted in the artificial development, by them, of a type of convulsion which was much less frequently encountered by other observers and which is rarely seen at present, unless produced in a similar manner, or unless accidentally and spontaneously generated.

Because of the vast amount of research concerning hysteria which was carried out by Charcot and his followers, and because of the persistent manner in which their classic descriptions of a single variety of hysteric convulsion have been, and are being, incorporated in all text books of nervous diseases, it is quite generally thought that this particular kind of attack is the only one which may be caused by hysteria. Unfortunately, then, our conception of hysteric crises is apt to be confused by these ubiquitous text-book descriptions of manifesta-

(*I am indebted to the Editor of the Journal of Abnormal Psychology for permission to incorporate in this section material drawn from a previous paper entitled "Psychogenetic Convulsions" Jour. of Abn. Psych., vol. 5, p. 1.)

tions which were purely the result of most elaborate, but unconscious, suggestion and of psychic contagion, and which occurred almost exclusively in a comparatively small group of patients in one hospital. Indeed, the majority of text-book considerations of the disease do not show that there has been any progress in our knowledge of this disease since the time of Charcot. This affects more particularly those who do not specialize in neurology and who are dependent, therefore, upon text-books. Consequently, these practitioners are led to infer that hysterics are capable of presenting only one kind of attack—hystéro-epilepsy, grande hystérie, hysteria major—and as the effect of their inference other varieties are most apt to be looked upon as being epileptic in origin.

The attack of grande hystérie was divided into five stages: (1) The prodromal stage. (2) The epileptoid stage. (3) The period of clownism, or of movements of wide range. (4) The period of emotional attitudes. (5) The period of delirium. The following is a summary of descriptions of the whole attack as elaborated by Charcot, Richer, and others of the Salpêtrière school:

1. *The prodromal stage* is characterized by various mental disturbances which may continue even for days, or for weeks, before the onset of the actual seizure. Objectively, the patient's actions deviate markedly from her usual stan-

dard; mainly because she becomes unusually emotional and irritable. Subjectively, she may experience almost any kind of sensory or psychic disturbances. The premonitory stage terminates with an aura which usually consists of globus hystericus, dimness of vision, tinnitus, etc. Following the aura the patient cries out, falls carefully to the ground, and loses consciousness.

2. *The epileptoid stage.* This stage consists of a period of tonic rigidity followed by clonic convulsions and concluding with muscular relaxation and stupor; the whole lasting but a few minutes.

3. *The period of clownism* then appears. The patient's body is tossed about wildly by reason of forcible muscular contractions—of movements of wide range—and, most characteristically, the highest degree of opisthotonos develops. Towards the close of this period she exhibits manifestations of great fear, or of rage. Tearing her clothes and biting at those who are trying to hold her she acts more like a wild animal than a human being.

4. *The period of emotional attitudes* gradually develops from that of clownism after the latter has lasted a short time. The attitudes are the dramatic representation of various emotions aroused by the hallucinations which the patient is experiencing, and whose character is dependent upon the nature of the primary exciting cause. In fact, the postures and the type of the

subsequent delirium are indices of the patient's ideas at the time. Consequently, they signify the original cause of the condition.

5. *The period of delirium* is a continuation of the stage of emotional attitudes from which it differs only in that with the gradual return of consciousness the patient gives verbal expression to her hallucinations, and the posturing disappears.

The entire attack may last from fifteen minutes to an hour, but, in some cases, the prolongation of certain stages, or the occurrence of repetitions of some of the stages, or of the whole crisis, may cause the condition to persist for many hours, and even for several days. Such an extended seizure, or succession of seizures, then constitutes status hystericus.

The objection to the elaborate and arbitrary descriptions of what is called grande hystérie—an attack which was asserted to be characteristic of severe hysteria—is that when we disregard the effects of clinical education and of psychic contagion one never encounters a patient whose seizures include all, or even most of these stages; the reason for this being that the so-called hystéro-epileptic attack represents a composite of a number of the common varieties of hysteric crises.

It is significant, indeed, that of the large number of cases of hysteria that Janet was the first to study only two patients presented

crises which conformed to the classic descriptions of grande hystérie. The same author brought together in the same ward three hysterics who separately presented three different kinds of seizures. "I was quite surprised," he remarks, "to see that after some time their symptoms were intermingled and that they had all three the same crises, with the same movements, the same delirium, the same invectives against the same individual. Little was wanting for a new type of hysteria to be formed in that ward which later might have been studied as natural." (Mental State of Hystericals, 399 and 406.)

Grande hystérie is similar to le grande hypnotisme in that the "stages" of each are artificial products—clinical artefacts originating in suggestion and psychic contagion. It is impossible to divide hypnotism and the innumerable kinds of hysteric crises into stages, for no two patients are alike in their hypnotic and hysteric reactions, and the nature of either of these conditions depends largely upon that widely varying factor, the individual psychic equation.

To satisfy that universal scientific desire for classification of objects and phenomena that often are incapable of being satisfactorily classified, we may attempt to divide the many types of hysteric crises themselves into what at best can be only arbitrary and unstable groups. Then, if the classification is sufficiently comprehen-

sive, we have what is merely a clinically useful means of grouping our cases, or of signifying in a few words the main features of the attacks of some case of hysteria. Therefore, the following incomplete classification may be convenient:—

Attacks Characterized Mainly by Motor Agitation in Addition to an Altered State of Consciousness.

1. *Psycholepsy.*
   - *A. Major epileptiform convulsions.*
   - *B. Focal epileptiform convulsions.*
2. *Emotional crises.*

Ambulatory Seizures with an Altered State of Consciousness.

1. *Nocturnal somnambulism.*
2. *Fugues and ambulatory automatism.*

Attacks whose Main Feature is an Altered State of Consciousness.

1. *Syncopal attacks.*
2. *Petit mal seizures.*
3. *Narcolepsy.*
4. *Catalepsy.*
5. *Trance states.*
6. *Ecstacy.*

After making a careful analysis of the histories of 100 consecutive cases of hysteria it was found that 62% had presented one or more kinds of hysteric seizures. This percentage closely approaches that of Pitres, namely, 63%. Recording only the most severe form of attack of each patient it was found that in the hundred histories examined the incidence was as follows: Major epileptiform seizures, 24%; focal epileptiform attacks, 4%; pseudo petit mal, 4%; ambulatory automatism and fugues—"psychic epilepsy"— 3%; narcolepsy, 4%; various kinds of simple emotional crises, 8%; syncopal attacks, 15%. Of the major epileptiform variety of hysteric seizure there were more than five patients whose crises were identical with those of epilepsy, and the proper diagnosis of these patients depended entirely upon the results of psychoanalysis* and upon "cure" by psychotherapy without the use of bromides. At least two of the cases of focal epileptiform attacks had been diagnosed by more than one physician as due to organic brain disease. Not a single patient presented seizures which even approached the descriptions of hystéro-epilepsy, but quite a few instances were recorded of attacks which resembled more or less atypically a single stage, or a combination of several stages, of grande hystérie.

*In this work the term psychoanalysis is employed comprehensively to designate any researches, regardless of technique, having as their end the discovery of causes of psychopathic conditions.

In describing the seizures of hysteria the sequence which will be observed is neither in accordance with the above outline nor is it one which is logical; like the classification it is merely convenient.

The emotional crises of hysteria vary in character and in severity from simple attacks of "hysterics" and of syncope to seizures which resemble one or more of the periods of clownism, emotional attitudes, and delirium of the old hystéro-epilepsy. The mild types are characterized by an emotional display of uncontrolable laughing and crying. When the attack results from anger the patient may destroy objects which happen to come under her observation. Ordinarily, such crises are looked upon as reprehensible outbursts of temper. When more severe the seizure is accompanied by a clouded state of consciousness with subsequent partial or complete amnesia for the period of the attack.

The different emotional crises may be divided into separate stages which vary entirely according to the individual. One patient may suddenly become unconscious, exhibit some grand movements with resistance, and then recover consciousness without manifesting any other phenomena. Another one partially loses consciousness, and, after a period of grand movements or passional attitudes, passes into what appears to be a state of stupor. After recovering from

the attack this patient informs us that while lying motionless and apparently unconscious she heard everything that was said, but she could neither talk nor move. A third ordinary type of seizure consists in a somnambulistic state during which the patient hallucinates some former episode—usually the one which acted as the exciting cause of her disease—and repeats more or less accurately and intelligibly her original reactions. One of the most common kinds of simple emotional attacks is characterized by an aura, followed by a cry, and loss of consciousness. The patient falls more or less carefully to the floor, undergoes a period of epileptoid movements, struggles wildly with those who are aggravating matters by trying to prevent her from hurting herself, and then recovers consciousness, usually without presenting any subsequent stupor.

The recognition of the many possible kinds of elementary emotional crises is without difficulty. With ordinary care in obtaining a history and in making the physical examination it should be impossible to make any mistake in the diagnosis. The causes, psychic mechanism, and treatment of these attacks is the same as that of the more grave types of epileptiform convulsions, and, consequently, these features will receive collective attention at the close of this chapter.

In common with other diseases whose nature

has been but illy understood and which have served as resources of diagnostic convenience, if not ignorance, epilepsy is being diagnosed less frequently as our knowledge of this disease progresses, but more particularly so as the result of our recognition of the fact that epileptiform manifestations may occur in diseases other than epilepsy, and especially is this true of the functional neuroses. On the other hand, hysteria and psychasthenia are the two diseases the diagnosis of which has increased most in frequency at the expense of that of epilepsy. Uncomplicated neurasthenia, however, probably never causes convulsions.

It is conceded now that the psychoneuroses can mimic very closely the different kinds of epileptiform attacks. Indeed, not a few cases of convulsions of psychopathic origin have been regarded as typical examples of major epilepsy, and mistakes are even more frequent in the diagnosis of petit mal and "psychic epilepsy."

Some of those who have made psychoanalytic researches of epilepsy and psycholepsy believe that a not inconsiderable number of cases of supposed major epilepsy, many cases of petit mal, and all cases which were formerly considered to be psychic epilepsy, in reality are not epilepsy, but are manifestations of those psychoneuroses which clinically are known as hysteria and psychasthenia. George M. Parker, for instance, is radical enough to state that "what is often regarded

as epilepsy does not really belong there,—that many a 'typical' epilepsy may on a closer study turn out to be a *functional psychosis.* This is especially true of the so-called 'psychic epilepsies,' which, as the psychopathological researches of our laboratory on many other different cases incontestably demonstrate, are all pure functional psychoses, subconscious dissociated states, having the tendency to recur, periodically or not, with all the energy characteristic of a fully dissociated system, reproducing the original psychomotor conditions during the accident, and often closely mimicking the psychomotor manifestations of epilepsy." (Psychopathological Researches in Mental Dissociation, by Boris Sidis, 1908.)

In speaking of the term psychic epilepsy, Sidis writes: "This term, though ambiguous, may be accepted, if understood not in the sense of epileptic origin or, as it is put, 'psychic equivalent' of epilepsy, but as epileptoid disturbances of a purely mental character due to dissociative states of functional neuropsychosis; in the same way as, for instance, psychic anæsthesias of functional diseases are not equivalents of organic neuron degenerations." *"The phenomena of 'psychic' epilepsy are of the nature of post-hypnotic automatisms."* (Ibid.)

Since it has been recognized, in the last few years, that, in addition to hysteria, psychasthenia also may occasion epileptiform seizures

the differential diagnosis has become even more difficult. It cannot be emphasized too strongly that the diagnosis epilepsy is justifiable only when all other diseases which are capable of inducing epileptiform attacks, particularly hysteria and psychasthenia, either positively can be excluded or recognized as associated conditions. For it is quite common to encounter patients in whom hysteria or psychasthenia have been superimposed upon an epileptic foundation just as multiple sclerosis usually is complicated with hysteria.

Because an attack per se may possess all the features of one due to epilepsy is no reason why the patient should be considered as epileptic. It is granted now that hysterics and psychasthenics not only may have auræ which may be similar to those of epilepsy, but that during crises they not infrequently injure themselves in falling, have involuntary evacuations of the bladder and rectum, and bite their tongues. The presence or absence, therefore, of these accidents no longer can be regarded as differential characteristics. "It is becoming recognized," observes Ernest Jones, "that in a grand mal attack there may be absolutely nothing in the nature of the attack itself to indicate its source." (Mechanism of a Severe Briquet Attack, Jour. of Abnormal Psych., vol. 2, p. 219.)

As the psychoneuroses are only closely inter-related clinical syndromes which very frequently are indistinguishable from one another it is always difficult, and often impossible, to differentiate the attacks which may occur as symptoms of these conditions. For this reason it is often convenient to include the psychogenetic crises either of hysteria or of psychasthenia under the designation psycholepsy.

Formerly the French writers applied the term hystéro-epilepsy to hysteria when this disease occasioned what might be called the Salpêtrière type of convulsion—grande hystérie. Unfortunately, the significance of this name has been degraded by the indiscriminate manner in which it is used at present. Beside its original connotation it is used by various writers to signify the coexistence of hysteria and epilepsy, and some have attempted even to distinguish a new disease, to which they apply this name, which is neither hysteria nor epilepsy. As the term is no longer distinctive it should be discarded from modern neurologic nomenclature. The designations hysteric convulsions and psychasthenic convulsions are ones which cannot be confounded with epilepsy, or otherwise misinterpreted, while the term Briquet attack is useful to signify the many atypical and less completely developed forms of hysteric and psychasthenic emotional crises.

It is safe to say that there is no type of seizure which is characteristic either of hysteria or of psychasthenia, and that because of the psychic mode of genesis of manifestations of these diseases any kind of attack is possible. However, in these psychoneuroses it is probable that, with the exception of simple emotional crises, major epileptiform convulsions occur more frequently than any other variety of seizure. There are two good reasons for the preponderance of this type of convulsive syndrome: quite commonly psychic contagion leads to the development of heterogenous psycholepsy, and, secondly, the malady originates less frequently autogenically as the direct elaboration of normal psychic reactions to intense emotion.

It is not at all unusual for normal persons to have witnessed, or to have read descriptions of, an epileptic crisis, and it is to be deplored that cases of psychoneurosis have far greater opportunity of acquiring information concerning the features of such attacks owing to the fact that in hospital practice these unfortunates are usually treated in the same wards with epileptics.

Psycholepsy may develop while the patient is exposed to psychic contagion, or the knowledge which she has acquired of convulsions may remain dormant until some exciting cause precipitates the kind of attack with which she is familiar, and which she may have feared and expected.

If we subject all of our cases of psycholepsy to a searching inquiry we will find that from 50 to 75% of the patients have been more or less closely associated with epileptics. Also, that frequently they have observed epileptic convulsions and that their seizures are identical with those which they have witnessed. In many of these cases we can trace the patient's attacks so directly to ones which were observed during exciting circumstances in friends or relatives that their genesis by psychic contagion is indubitable. Mention has already been made of the son who developed hysteric Jacksonian seizures whose features were precisely like those of his hysteric mother. In another interesting case, one of major epileptiform convulsions due to hysteria, the seizures developed after the patient had seen her infant brother undergo a large number of convulsions during the course of a fatal attack of pertussis. Though many similar instances might be cited from personal experience one abbreviated record is sufficient to illustrate the influence of psychic contagion, reinforced, in this case, by direct hetero-suggestion.

Elizabeth M., a mill-girl, aet. 22, had never experienced any seizures until July 29, 1907, when suddenly, and without afterwards being consciously aware of any apparent cause, she screamed, ran a few steps, and then fell unconscious. General tonic and clonic spasms

appeared, of which the movements of her jaw caused a laceration of the tongue. After a postconvulsive stuporous state which lasted three hours she regained consciousness, but felt exhausted. Upon the advice of her physician she remained in bed three days. During two nocturnal major convulsions evacuations of the bladder occurred. Besides this type of attack she had numerous emotional ones which were preceded by a peculiar sensation originating in the epigastric region and which caused her to feel faint. The subjective sensations of the attack itself consisted of palpitation, dyspnœa, and exhaustion.

The patient was unaware of the causes of any of her manifestations. She knew, however, without appreciating its genetic significance, that each diurnal attack was preceded by fear and expectant attention. Often she would say to her mother: "I know that I am going to have an attack to-night." Frequently she had nocturnal seizures which were succeeded by localized amnesia, and which were characterized by calling for her parents, irrational talk, and apparent fear.

The statements of the mother, and the results of interrogation of the patient before and during hypnosis, indicate that the mechanism of genesis of her symptoms was as follows: Until she was 15 years of age she had never exhibited any manifestations of nervousness; always

having been socially inclined and full of fun. Her menses did not appear until her twentieth year, and following their establishment she menstruated only every three months. Because her menstrual function was not like that of other girls she worried excessively about her health. Indeed, she thought that she had an abdominal tumor and that surely she would die soon. The girls with whom she associated encouraged her belief in the serious import at first of her failure to menstruate, and later, of the abnormal periodicity of this function.

Now, six months before her first seizure, and in her presence, a friend was seized with a convulsion. The shock of the incident was increased and rendered more personal by the fact that this friend subsequently told her that she was subject to convulsions because of menstrual irregularities, and, furthermore, that these abnormalities were the same as Elizabeth's, therefore Elizabeth surely would develop convulsions. Following this accident and the suggestive explanation of its cause Elizabeth worried much about the possibility of the same condition appearing in herself. Frequently she asserted that she would become an epileptic, and her mother stated that she talked constantly about this disease. Finally the inevitable took place; she began to have convulsions which at first were exactly like the one she had witnessed.

In September, 1908, she became engaged to a man who, four months after having impregnated her, jilted her following a quarrel. Having taken the matter to court and thus secured unenviable newspaper notoriety she was ostracised by her friends. Naturally, these unfortunate occurrences greatly aggravated her nervous condition, and she became obsessed with the idea of killing her violator, regardless of the consequences.

The type of attack which simulated petit mal developed only after the quarrel. Each of these crises was caused either by thinking about her troubles, by worrying over the fact that she was pregnant, or, subsequently, by reproaching herself for having provoked an abortion by means of drugs. The nocturnal attacks were induced by thinking of her lover before retiring, or by erotic dreams of which he was the subject. A number of psychasthenic obsessions with which she was afflicted were traced in the same manner to the nervous shocks which she had sustained.

These results of analysis, though apparently so simple and so easily ascertained, could have been obtained only by means of some psychoanalytic method—hypnotism in this case—for the reason not only that she was not consciously aware of the causal relations between her various manifestations and the psychic stresses, but that some of these had been entirely forgotten, or suppressed. Without such

painstaking research she would have been considered an epileptic and treated unavailingly as such.

The diagnosis, psychasthenic convulsions, was suggested by the presence of other indubitable evidences of psychasthenia. It was justified by the discovery of an adequate and direct emotional cause, by the successful reproduction, through the agency of hypnosis, of memories of events which occurred during attacks; and by reproduction of memories of a subconscious cause for individual seizures.

During a period of two months the patient was treated nine times with hypnotic suggestion. After the second treatment her obsessions disappeared and major convulsions no longer recurred. Attacks of pavor nocturnus continued to occur much less frequently as the consequence of dreaming about her former lover, and each dream was found to have been preceded during the day by conversations about this man. Unfortunately, the patient discontinued treatment before further improvement could be obtained. As she had responded so well to psychotherapy probably all of her neurotic manifestations could have been caused to disappear had she continued the treatment a little longer. A most detrimental factor in the case was the fact of her constantly being reminded of her troubles; her father and many of her friends refusing to speak to her on ac-

count of her fall from virtue, and because the law suit had not been terminated.

The influence of contagion in the genesis of psychogenetic convulsions is shown even more forcibly in epidemic hysteria than in individual cases of the disease. Take, for instance, the epidemic of hysteria which reigned among the American Indians during the height of the ghost dance epoch. At a dance held on White-Clay Creek 100 out of 3,000—4,000 Indians succumbed to syncopal, convulsive, ecstatic, or other seizures. (Fourteenth Annual Report of the Bureau of Ethnology to the Sec. of the Smithsonian Institution, part 2, p. 917.) Or, among civilized whites, about 3,000 persons, or one in every six of those exposed, fell to the ground with similar crises during one of the early Kentucky revivals. (Citation by Davenport, Primitive Traits in Religious Revivals, 1906, p. 77.)

Now let us investigate the sources of autogenous psycholepsy. It is well known that any emotion tends to produce physical expression and that if the emotional perturbation be sufficiently intense diffuse muscular activity is inevitable. As the normal reaction to any severe mental stress, general tremors, convulsive movements, dilated pupils, and flushing, or pallor, develop with their associated emotional states of fear, anger, etc., according to the nature of the exciting cause and according to

the individual. If the emotional disturbance be sufficiently pronounced then syncope may be a terminal phenomenon.

When occurring in psychopaths these normal reactions may become elaborated subconsciously, by reason of the diminution of cerebral inhibition which is characteristic of these patients, and they may then occur, in this elaborated manner, without being consequent upon what normally would be an adequate external exciting cause; recurrence being effected by pathologic association of ideas. These anomalous, or perverted, and elaborated reactions then constitute psycholeptic attacks. According to this manner of genesis convulsions, if present, are merely the result of elaboration of the motor agitation which is a constituent of a normal emotional reaction, and the accompanying loss of consciousness is a temporarily massive dissociation which is evolved from the syncope.

It does not require any stretch of the imagination to conceive how one who is afflicted with a disease whose main objective characteristic is increased emotivity can develop psycholepsy from what normally would be a minor psychic stress. If we study the normal reactions to excessive emotional states we find, in fact, that they very closely resemble epileptic convulsions. In describing the physical expression of fear Darwin (The Expression of the Emotions

in Man and Animals, 173, p. 291,) wrote: "As fear increases into an agony of terror, we behold, as under all violent emotions, diversified results. The heart beats wildly, or may fail to act and faintness ensue; there is a death-like pallor; the breathing is laboured; the wings of the nostrils are widely dilated; . . . ." "The pupils are said to be enormously dilated. All the muscles of the body may become rigid, or may be thrown into convulsive movements. The hands are alternately clenched and opened, often with a twitching movement. The arms may be protruded, as if to avert some dreadful danger, or may be thrown wildly over the head." Concerning the reactions to pain the same author stated (Ibid. p. 70.): "With man the eyes stare wildly as in horrified astonishment, or the brows are heavily contracted. Perspiration bathes the body, and drops trickle down the face. The circulation and respiration are much affected. Hence the nostrils are generally dilated and often quiver; or the breath may be held until the blood stagnates in the purple face. If the agony be severe and prolonged, the signs all change; utter prostration follows, with fainting or convulsions."

These descriptions might be applied with just as much accuracy to many of the attacks of hysteria, for are not these crises only the exaggeration of normal reactions? The hysteric emotional reaction is abnormal only in

that it occurs in the absence of what normally would be considered a commensurate external stimulus. Like many other symptoms of the disease the exaggeration of reactions represents reversion to juvenile types of reaction. On account of the psychic instability of children moderate pain and emotional disturbances, instead of being expressed by local convulsive movements of the face, and by other lesser modes of externalization, arouse a more profound reaction, so that syncope and convulsions may be provoked.

Granting that psychic contagion was responsible for the majority of convulsive attacks which occurred so universally during ghost dances, Kentucky revivals, early Methodism, and in many other religions, victims were required to initiate the contagion. Certainly all of these could not have been individuals who had been previously subject to the malady. The convulsions of many of these originators of contagion undoubtedly represented simply the tendency of extreme mental excitement to be propagated as muscular agitation whose intensity arose to the development of convulsions.

Besides the evolution of hysteric convulsions from normal emotional reactions, there are innumerable ways by which the malady can be suggested upon the patient. About 5 or 10% of the cases are consequent upon operations. The following case is instructive in that it

illustrates how the seizures may be elaborated from a surgical experience; the features of the attacks being derived from the reactions to etherization and from associated incidents:

About two weeks after having been operated for adenoids a boy of fifteen commenced to have daily crises. These occurred at the same hour each day, and each was preceded by an aura of pain in the left side of his abdomen, followed by difficulty in breathing, a sensation of constriction in the chest, and by numbness and tingling of the whole body. Following these sensations he seemed to become unconscious and general convulsive movements appeared. The whole seizure lasted about five minutes, and after its subsidence he felt weak and nauseated. By exerting pressure upon the left side of his abdomen the attack could be reproduced.

Now this peculiar type of crisis is easily explained from data obtained from the boy's father, and from the results of hypnotic psychoanalysis. Being greatly alarmed at the prospects of the operation, which had been performed one year previously, the patient had resisted etherization so much that an orderly had used decided force in holding him down. During these struggles the efforts of the orderly resulted in the production of pain in the left side of the patient's abdomen. About this time the effects of the anæsthetic developed; he

began to experience numbness and tingling of the body. Local irritation from forcing the anæsthetic in order more quickly to stop his struggles caused a feeling of suffocation. After recovering consciousness naturally he felt weak and nauseated. Thus all of his symptoms may be explained; even the time of onset of his attacks corresponded to the time of the operation. Though the condition had lasted a year one treatment with hypnotic suggestion effected a satisfactory cure.

More interesting is the case of Marie; a case reported by Janet, who asserts that it is one of the first observations concerning subconscious fixed ideas in a hysteric: Immediately before each menstrual period Marie became sombre and violent. Twenty hours after the onset of menstruation the flow suddenly ceased, and a severe chill shook her whole body. Then, following a sharp pain that arose from her abdomen to her throat, violent convulsions set in, and these, in turn, were succeeded by maniacal delirium. (She had been brought to the hospital because she was thought to be incurably insane.) For as long as two days the stages of delirium and convulsions alternated with brief periods of respite, and then, after vomiting blood several times, her usual state of consciousness returned and she was amnesic for the whole of the attack. Being questioned as to the manner in which her first menstrual

period had appeared, and had been interrupted, she was unable to answer clearly; she seemed to have completely forgotten.

Having remained in the hospital eight months without any improvement it was decided to hypnotize her, and then to endeavor to ascertain her early menstrual history. After inducing the somnambulistic state of hypnosis Janet was enabled to discover the causes of the convulsive seizures and of other symptoms which do not concern us. When Marie had attained the age of thirteen her menses first appeared. Not understanding this phenomenon, and laboring under a misapprehension regarding its cause, she was ashamed, and sought to suppress the flow. To this end she went out and plunged into a large tub of cold water. Twenty hours after the appearance of the flow her device was successful; the flow suddenly ceased, a severe chill set in, she was delirious for several days and ill for a considerable time. Subsequently, the menses did not reappear during five years and, finally, when they did return, they were accompanied by the crises which have been described. The onset of each menstrual period induced reproduction of the pathologic results of the initial suppression without, however, reviving the memory of the original experience itself. Janet incidentally remarks that by modifying the subconscious idea he readily caused the attacks and the

delirium to disappear. (Mental State of Hysterics, p. 282.)

It is, indeed, deplorable that a prolific cause of hysteria and its manifestations is the culpable ignorance of young girls concerning, at least, the menstrual function. Many young girls who have not been prepared for the onset of menstruation become so alarmed by the first indication of a flow that they develop a psychoneurosis with the consequence that each subsequent menstrual period acts as the excitant for some kind of attack. Like Janet's case the manifestations are psycholeptic in not a few of these victims of a faulty system of education. Until a thorough examination had been made and the complete history obtained one of the most puzzling diagnostic problems was presented by just such a case. A young married woman had been perfectly well, from the neurologic point of view, until her thirteenth year when, not having received any instruction relative to the function of menstruation, the initial onset of the flow so frightened her that she became much excited, and then maniacal. Subsequently, each menstrual period provoked a hysteric crisis, and, as the years passed by, these seizures gradually became elaborated until they resembled epilepsy so closely that this diagnosis had been made by more than one physician.

Just one more example of the manner in

which psycholepsy may be originated. Sallie S. had been subject to hysteric crises for eight years. At first her seizures were characterized only by uncontrollable crying and laughing, but gradually they became more highly developed so that finally they were typical of major epilepsy. It was found that she had never had any attacks, nor symptoms of hysteria, until one month after the death of her first child. Upon resorting to hypnosis everything became clear. Each attack was caused by chance occurrences, or remarks, which caused her to think of her dead child, and just preceding the onset of the seizure she experienced hallucinations concerning the illness and the death of this child. During her usual state of consciousness, however, she positively asserted that she knew of no cause for her condition, and that she did not believe that the death of her child had anything to do either with the illness or with the causation of individual crises. Besides other significant features, the recovery of memories of events which took place during her seizures, and the fact that she has not had a single convulsion since the first hypnotic treatment, are sufficient to confirm the diagnosis—hysteric psycholepsy.

Every emotion tends to some kind of expression. When an individual suppresses the reaction he performs what in ordinary parlance is designated a bottling up of emotion—instead

of dissipating the emotional feeling he preserves it, with the consequence that it is prolonged only to crop out at intervals. It is a fact of common observation that the man who gives free vent to his wrath soon forgets its cause, while he who suppresses his exhibition of anger does not soon forget the provocation; his anger smoulders within him, and both himself and its object long continue to feel its effects. For the same reason the most intense grief is that which is experienced without any outward demonstration. To revert to the popular recognition of the effects of emotions which have not been adequately expressed we have the not uncommon remark—one whose truth is affirmed by sound psychologic principles—that is made about an afflicted person: "If she could only cry she would recover."

We know that dissociation of memory complexes is only too readily effected in hysteria. When a hysteric fails sufficiently to react to an intense emotion, or when she voluntarily strives to forget the painful occurrence, then the complex concerning the episode becomes completely submerged into subconsciousness. The result of this process is the appearance of some kind of psychopathic manifestation whenever the dissociated complex is aroused into activity by chance association of ideas. A hysteric manifestation once having occurred, the proper association of ideas should always

tend to reproduce the symptom, just as the proper stimulus causes us to remember any event in our lives; the odor of a rose tends to arouse the different mental images pertaining to the conception "rose," or the sight of the ocean may arouse unpleasant sensations in the epigastric region of one who has experienced seasickness.

Among other interesting clinical studies of the genesis and subconscious mechanism of different psychoneurotic manifestations Sidis relates the history of a case which perfectly illustrates the manner in which association of ideas may induce recurrence of psycholeptic crises. Part of his account is as follows: "The patient complains of 'shaking spells.' The attack sets in with tremor of all the extremities and then spreads to the whole body. The tremor becomes general and the patient is seized by a convulsion of shivering and tremblings and chattering of teeth. Sometimes he falls down, shivering, trembling and shaking all over. The seizure seems to be epileptiform, only it lasts sometimes for more than three hours. The attack may come on any time during the day, but is more frequent at night. During the attack the patient does not lose consciousness, he knows everything that is taking place around him, can feel everything pretty well; he only chatters violently with his teeth, trembles and shivers all over and is

helpless to do anything. There is also a feeling of chilliness, as if he is possessed by an attack of 'ague.' The seizure does not start with any numbness of the extremities, nor is there any anæsthesia or paræsthesia during the whole course of the attack. With the exception of the shivers and chills the patient claims he feels 'all right.'

"Patient was put into a deep hypnoidal condition very close to the hypnotic state. There was some catalepsy of a very transient character, but no suggestibility of the hypnotic type. Now in this hypnoidal state it came to light that the patient 'many years ago' was forced to sleep in a dark, damp cellar where it was bitter cold. The few nights passed in that cold cellar he had to leave his bed, and shaking and trembling and shivering and chattering with cold he had to go to urinate, fearing to wet his bed, in expectation of a severe punishment. The patient, while in that intermediary, subwaking, hypnoidal state, was told to think of that dark, damp, cold cellar. Suddenly the attack set on,—the patient began to shake and shiver and tremble all over, chattering with his teeth, as if suffering from great cold. The attack was thus reproduced in the hypnoidal state. 'This is the way I have them,' he said. During this attack no numbness, no sensory disturbances, were present. The patient was quieted, and after a little while the

attack of shivering and cold disappeared. Now the room in which the patient was put into the hypnoidal state was very dark, and accidentally the remark was dropped that the room was too dark to see anything; immediately the attack reappeared in all its violence. It was found later that it was sufficient to mention the words 'dark, damp, and cold' to bring on an attack even in the fully waking state. We could thus reproduce the attacks at will,—those magic words had the power to release the pent-up subconscious forces and throw the patient into convulsions of shakings and shiverings, with feeling of cold and chattering of the teeth.'' (Studies in Psychopathology, Boston Med. and Surg. Jour., Mar. 14, 1907, to Apr. 11, 1907.)

Often trauma is one of the factors of the emotional stress which terminated in, or was followed by, the development of psycholeptic seizures. The memory of the resultant pain becomes, therefore, a constituent of the complex of the original experience. In fact, the part that was the seat of pain may continue indefinitely to be painful. In this event the pain is symbolic of the accident. Now, just as the attacks of Sidis' patient were precipitated by arousing the idea of coldness, of darkness, or of dampness, so the seizures which have developed after traumatism may be caused, perhaps, to recur by means of any stimulus which

induces the idea of injury, even though the patient is consciously unaware of the association between this idea and the consequent attack.

Naturally pressure on the area which originally was the seat of trauma is the most effectual mode of arousing the idea of injury, or, by association of ideas, of provoking recurrence of the psycholeptic state. Such being the case there exist what truly may be designated hysterogenic zones. These zones are infrequent unless created by suggestion, and when they do exist the induction of an attack by means of pressure upon the zone is just as much a psychic phenomenon as the effects of hearing the words "dark, damp and cold" in Sidis' patient. In either case, the pressure, or the "hysterogenic" words, induce by subconscious association of ideas, repetition of the whole of the original mental state and precipitate a crisis that is identical in character with the original reaction unless modified by elaboration or by contamination through admixture with repetitions of the reactions of other experiences.

If we hypnotize a subject for the first time and then cause some act to be performed after having exerted pressure upon some part of his body we cause an association of ideas between the pressure and the act. The second time that this subject is hypnotized pressure alone on

the same area is very apt to be followed by the same act that was performed during the first hypnotic state. The experiment is successful even though we have been careful to avoid making any verbal suggestions which would tend to produce the desired result. In the same manner it is possible to manufacture hypnogenic zones; in fact, these were formerly described, but their true significance was not grasped. A hypnogenic zone is the analogue of a hysterogenic zone, and there is nothing more remarkable about either of these than their illustration of the effects of association of ideas.

But we do not have to resort to hypnosis, or to the hysteric, in order to observe impressive examples of the physical effects of association of ideas. Those occurring under normal circumstances are equally wonderful. Pawlow's dogs, for instance, exhibited numerous instances of the effects of association of ideas upon the secretion of the digestive fluids. Merely attracting the attention of one of these dogs to food acted upon the secretion of saliva in the same manner as when it was actually placed in his mouth. This psychologic reflex could be aroused by association. Thus: "If a definite musical note be repeatedly sounded in conjunction with the exhibition of dry meat-powder; after a time the sound alone of the note is effective. Similarly with the exhibition

of a brilliant color." (The Work of the Digestive Glands, 1910, p. 85.)

Recurrence of hysteric crises is usually effected through the agency of mediate association of ideas. As the pathogenic memory complex is dissociated from consciousness the hysteric remains unaware of the underlying association of ideas—the attacks are not accompanied by conscious recollection of the original experience. This form of mediate association of ideas in itself is not abnormal. It becomes so only when its results are abnormal. Normally one idea may suggest another by means of a third, to which both are associated, without necessitating the raising of this third idea above the level of consciousness. In other words, the association of the two ideas takes place through the subconscious instrumentality of one which is common to both. Though almost invariably cases of hysteria present manifestations which are the result of mediate association of ideas this form of ideation is said to be uncommon in normal life.

Expectant attention may induce recurrence of psychoneurotic attacks. This fact has been the subject of grave misinterpretation. When a supposed epileptic announced that he would have a seizure at such and such an hour on a certain day, and when this came about just as he predicted, then the case was recorded as an instance of wonderful, or supernatural, pre-

vision. Foissac's Peter Cazot is the patient whose case has been most frequently cited. The facts of this case and the protocol of the experiment that were performed with the patient were included in the report to the Royal Academy of Paris, in 1831, of the Committee of Investigation of Animal Magnetism. (Quoted by Leger, Animal Magnetism, 1849, p. 98.) In commenting upon the case Leger remarked that notwithstanding that the patient could indicate, a month or two in advance, the day and hour at which he was going to have a convulsion, yet he did not foresee his own death from an accident two days after having predicted the cure of his disease at a date three months distant.

The explanation of the "prevision" of psychoneurotic attacks, or other manifestations, is simple. When a psychopathic individual states that he will have an attack at a certain time his statement constitutes an autosuggestion which is almost sure to be carried out, and when the patient utters the prediction while in the hypnotic state, as did Peter Cazot, the autosuggestion is still more forcible.

Very often psycholeptics experience auræ which may be identical with those of epilepsy. Their origin can be discovered only by means of the most careful researches into the patient's subconsciousness, and then, no matter how bizarre and inexplicable they may have ap-

peared, an adequate and perfectly reasonable cause will be found. The perception of any sensory stimulus which was experienced immediately preceding the pathogenic emotional casualty, or its consequent first attack, may become a constituent of the memory complex which has to deal with these occurrences. The more intense the stimulus and the more closely associated it was with the original experience the more apt is its memory to become incorporated with the resultant complex. Psycholeptic crises are stable—tend to recur without variation—therefore, before each subsequent attack which is caused by a direct stimulus the patient should experience as an aura the sensory impression, or impressions, which preceded the first attack. Or, any accidental occurrence which recalls the memory of the precedent sensory perception tends to cause repetition of the attack which originally followed this perception. .

This phenomenon, too, is only an expression of association of ideas and it conforms closely to laws which have been induced. William James postulates as fundamental the law that "When two elementary brain-processes have been active together or in immediate succession, one of them, on recurring, tends to propagate its excitement into the other." (The Principles of Psychology, vol. 1, 1905, p. 566.) And according to Bain "Actions, sensations, and

states of feeling, occurring together or in close succession, tend to grow together, or cohere, in such a way that when any one of them is afterwards presented to the mind, the others are apt to be brought up in idea.'' (The Senses and the Intellect, 1864, p. 332.)

A good example of the genesis of auræ is afforded by the case of the author Gustave Flaubert. The following account is that of Maxime Du Camp, as quoted by Grasset: ''All at once without any apparent reason Gustave would throw up his head and become very pale. He had felt the aura. His look was full of anguish. He would say, 'I have a flame in my left eye;' then a few seconds later, 'I have a flame in my right eye; everything seems to me to be the color of gold.' This singular condition would sometimes persist for several minutes. Then his visage would grow pale again and take on a desperate expression; he would walk about rapidly; then he would fairly run to his bed and stretch himself out on it dull and sinister as if he were lying alive in a coffin. Then he would cry out: 'I have hold of the reins! Here is the carrier! I hear the bells! Ah! I see the lantern of the inn!' Then he would utter a cry whose piercing accent still vibrates in my ears, and a convulsion would then come on. This paroxysm, in which his entire body trembled, was followed by a deep sleep and profound exhaustion

which lasted for several days." (The Semi-Insane and the Semi-Responsible, trans. by Jelliffe, 1907.) The cause of these various hallucinatory antecedents of a convulsion is plainly made evident by the fact that the first attack occurred "in the neighborhood of Bourg-Achard, at the moment when a post-carrier was passing to the left of the cabriolet, and when on the right the lights of a lonely inn were perceptible in the distance."

Parker writes of a case of psychomotor epilepsy in which the convulsions and minor attacks were preceded by a foul taste and a fetid odor. This aura, one which is not uncommon in epilepsia vera, was found, by means of hypnosis, to be due to the fact that just prior to his first seizure the patient had partaken of meat which, by reason of its offensive nature, had caused these perceptions.

These cases like many others which might be quoted, show that the study of auræ, because of their connection with the emotional first cause, is prolific of results, both in etiologic research and in therapeutic indications.

As the consciousness of the patient is in partial or complete abeyance during all seizures, each psycholeptic attack, of hysteric origin at least, is a more or less complete somnambulistic state in which the patient experiences subconsciously the recurrence of some former emotional episode, usually the exciting cause of the

disease, and presents a repetition of the original reactions which, however, are modified by the pathologic elaboration and contamination to which they have been subjected. Indeed, the character of the crisis, whether convulsive or delirious, depends almost entirely upon the nature of the hallucinations, or of the delusions, of the patient at the time; the objective symptoms being indicative, therefore, of the mental state of the patient. Being somnambulistic states these attacks, in well developed cases either of psychasthenia or of hysteria, are succeeded by amnesia for the period of their duration.

Psycholeptic seizures are induced, as already intimated, either by conscious or by subconscious association of ideas with the conscious, or with the submerged, memories of the original painful emotional experience, or with those of any antecedent sensory impression which united with the others to form a complex of the primary experience. If, as an exciting cause of a psychoneurosis, an individual who is predisposed by psychopathic heredity is subjected to a relatively severe emotional shock any subsequent psychic stimulus which, by association of ideas, recalls this experience thereby will tend to cause recurrence of its original reactions, or motor expression, in an elaborated and pathologic manner. In hysteria the whole mechanism is more or less sub-

conscious; the patient usually being absolutely ignorant, as far as consciousness is concerned, of any reason for the onset of each attack. This fact has been explained biologically by assuming that, as a reaction of defense, there occurs voluntary suppression from consciousness of the memories of the primary experience.

Modern psychopathologic researches incontestably have shown that what appears to be absolute loss of memory of the causes and events of each attack is, in reality, always functional amnesia; one which is due to dissociation or splitting off from consciousness of the system of memories concerning the original stress and each subsequent crisis, and that these dissociated or submerged complexes are preserved in subconsciousness, from which they can be tapped by means of association experiments, hypnoidization, hyponotization, automatic writing, analysis of reveries and dreams, etc.

Though the whole mechanism of hysteric accidents is subconscious it appears that in psychasthenia the patient is usually superficially aware of the causes of his symptoms. In other words, hysteric manifestations are caused by subconscious association of ideas, while those of psychasthenia are usually caused by conscious association of ideas. Furthermore, it is by reason of fear and expectant attention that the

crises of psychasthenia are commonly induced. It is important to remember, however, that the conscious fear and the conscious expectancy are purely obsessions which are originated by dissociated components of normal consciousness.

In about 50-80% of those who are hypnotized the dissociation of consciousness is so profound that after being "wakened" the subject is incapable of remembering consciously any of the events of the hypnotic state. While one of these hypnotic somnambulists is hypnotized suppose we suggest to him that when he sees us put on our glasses, after he is wakened, he will perform a certain specified act—light the gas, for instance. Being a somnambulist he does not remember this suggestion after the hypnotic state is dispelled; we have dissociated from his consciousness a certain system of ideas just as complexes become submerged in hysteria. Now, upon adjusting our glasses the subject is most apt to carry out the post hypnotic suggestion which was imparted to him, without, however, knowing the true reason for doing so. Through the agency of subconscious association of ideas our stimulus arouses into activity the dissociated complex which, in turn, induces the idea of lighting the gas. Being ignorant of the true reason for his act he unconsciously substitutes some specious motive — a very human-like procedure — and this he will

present as his reason if asked why he lighted the gas in view of the fact that further illumination is unnecessary.

In this manner we have completely duplicated the psychic mechanism of a hysteric attack, and it would be just as easy to substitute convulsions for the simple act of lighting the gas. On the other hand, suppose our subject is not a somnambulist — suppose that after being wakened he does remember the events of hypnosis. Then we have a mechanism which is similar to that of a psychasthenic manifestation. When we put on our glasses he becomes obsessed with the idea of lighting the gas, but he is aware of the exact source of this impulse.

To illustrate the difference between the psycholepsy of hysteria and that of psychasthenia let us adduce a case of each of these maladies. A male, aet. 19, was knocked from a box, and fell, striking his head in the occipital region. The injury resulted in immediate unconsciousness which lasted only for two or three minutes. Following this accident he was perfectly well except that he had a moderate headache for several hours. At this time his father, for whom he cared to an extent which was considered unusual, was acutely ill for ten days, and then died, after having had a convulsion. When the patient learned of his father's death he was seized with severe pain in the head, fell unconscious, and presented the

typical manifestations of a major epileptiform convulsion similar to the one which had occurred in his father and of which he had received a graphic description. Subsequently, and at intervals of about a month, the seizures recurred; each being preceded by pain in the head. The later attacks, beside being characteristic otherwise of those of epilepsy, became contaminated with symptoms of hysteria. Being questioned he professed absolute ignorance of the cause of these crises.

After inducing the hypnotic state it was demonstrated that he was perfectly cognizant of what was going on about him during his seizures, and he acknowledged that each followed allusions to his father, or to death, although he had been unaware of this sequence when in his usual state of consciousness. During convulsions, thoughts of his father occupied his mind, and he felt that he must go to him. Each crisis, therefore, was a somnambulistic state resulting from chance occurrences which, by unconscious association of ideas, provoked the elaborated reproduction of his emotional reactions to the shock produced by learning of his father's death. The aura of his attacks — pain in the head—is capable of being interpreted as a hallucinatory recurrence of the headache resulting from the fall which was so closely associated, in time, with his father's fatal illness.

The following case is in decided and typical contrast to the one just summarized. A psychasthenic male who had just had an attack which very closely simulated petit mal stated that prior to its onset he was not thinking of himself, or of any of his symptoms, until a friend began to discuss a relative's death from heart disease. At once he was impelled to think of his own cardiac attacks, and, after a short period of fear and expectant attention, the symptoms appeared which were characteristic of one of his own seizures. This patient was always aware of the association of ideas which preceded his attacks, and he appreciated, in a self-condemnatory manner, the genetic influence of his fear and expectancy.

An intelligent psychasthenic will often admit voluntarily that his attacks are due to the provocation of fear and expectancy by association of ideas, and even the dispensary patient generally realizes, after a few words of explanation, that his seizures are caused in this manner. It appears, nevertheless, that the greater part of the mechanism of genesis of individual seizures may be subconscious in a few cases of psychasthenia.

Another notable differentiating feature between the psycholepsy of hysteria and that of psychasthenia is the curious fact that a hysteric is rarely inconvenienced or distressed by the occurrence of attacks, no matter how severe

or incongruous they may be, while to the psychasthenic each is characterized by the greatest anguish.

For the reason that the prognosis and treatment of the psychoneuroses is necessarily so dissimilar from that of epilepsy a correct diagnosis is most essential. Another cogent reason for diagnostic precision is afforded by the incalculable amount of harm which may result from the psychic stress provoked by informing a hysteric, or psychasthenic, that he is afflicted with epilepsy; a disease which is looked upon with so much horror by the laity, and which is believed by them to be incurable and stigmatic. In view of these facts, then, it is incumbent upon us to exercise constantly the greatest care in order to prevent mistaking hysteria or psychasthenia for epilepsy, or vice versa. Indeed, some cases may require several weeks, or months, of careful study by an expert psycho-pathologist before a definite diagnosis can be made.

As recent research has shown that epilepsy is incapable of causing any symptoms which cannot be duplicated, or at least simulated, by hysteria and psychasthenia, and as the crises, therefore, of these psychoneuroses may be identical with those of epilepsy, we are unable now to make the diagnosis epilepsy simply because a patient is afflicted with seizures which conform to the classical text-book de-

scriptions of those which are supposed to be characteristic of this disease. It is only by careful consideration of the results of some psychoanalytic method which reveals the subconscious activities of the patient that we can differentiate, in almost a positive manner, the most highly developed types of hysteric and psychasthenic attacks from those due to epilepsy. In a few cases the diagnosis psycholepsy can be made positively only when the patient has been "cured" in a short time by some therapeutic measure which is effective only in that condition. As all of the symptoms of an epileptic attack can be duplicated by psycholepsy the basis of differential diagnosis may be considered from the point of view of the psychoneuroses.

Psycholepsy

1. Attacks are due either to conscious or to subconscious association of ideas.

2. The attacks in a given case are always of a like nature unless variation occurs as the result of plurality of primary stresses.

3. Prevention of attacks by means of suggestion, or of other psychotherapeutic means. (It seems more than improbable that a case of true epilepsy has ever been cured by means of psychotherapy alone.)

4. Induction of attacks through the agency of suggestion.

5. Susceptibility of the patient to suggestion during the height of a crisis.

6. Bromide treatment does not favorably influence the seizures and usually aggravates the other symptoms.

7. In those cases in which the crises have persisted many years intelligence and memory do not deteriorate progressively. Amnesia, if present, is purely functional in character, and events which apparently have been forgotten are capable of being recovered by means of hypnosis and certain other well known procedures.

8. The discovery, through some psychoanalytic method, of a wealth of pathogenic and dissociated, or subconscious ideation.

9. Conservation in subconsciousness of the memories of events which occurred during seizures. Demonstration of this conservation of memories by causing reproduction through the agency of methods which have already been mentioned.

It is to be hoped that some competent investigators who possess the requisite opportunities will interest themselves in researches having as their end the corroboration of what theoretically has been assumed, and to a certain extent demonstrated: that in epileptics it is impossible by any known means to recover memories of events which happened during the height of a

convulsion. The recovery of such memories may be accepted, however, as unimpeachable evidence of the psychogenic nature of a convulsion; no matter how typical otherwise of epilepsy it may have seemed. This statement may appear to be too conclusive, but in all the literature at my command I have been unable to discover any case of *undoubted* epilepsy in which the memories of events which occurred during attacks were successfully reproduced, and, on the other hand, investigators who have succeeded in reproducing such memories in supposed cases of epilepsy unite in saying that the cases have always turned out to be ones of psycholepsy.

Inasmuch as the existence either of epilepsy or of psychoneuroses in the progenitors may cause the development, in the offspring, of any of the conditions under discussion, the discovery of neuropathic heredity is not of great importance in the differential diagnosis of epilepsy, hysteria, and psychasthenia.

When in doubt as to the cause of convulsions it is Bernheim's custom to press upon the abdomen, or other region in which the aura commences, while making the suggestion that the pressure will be painful; then that the globe rises in the throat, and that the patient feels her crisis approaching. In this manner he creates a hysterogenic zone and causes the onset of an attack. In the great majority of

cases, he affirms, the crises are capable of being provoked experimentally by this means, and without the induction of the hypnotic state. Having succeeded in reproducing the crisis he considers that the diagnosis hysteria is confirmed, and that the condition is curable. (Hypnotisme et Suggestion Hystérie Psychonévroses, 1910, p. 255.)

The knowledge possessed by epileptics that they are afflicted with an incurable organic nervous disease; the severity of the symptoms of this disease; and the unexpected manner in which old symptoms may recur, or new ones suddenly appear, together with the state of fear and expectant attention which thereby is ultimately provoked, often leads to the development of a superimposed psychoneurosis. Consequently, the fact that a patient presents the hysteric or psychasthenic type of temperament, in addition to the discovery of "stigmata" of either of these conditions, does not necessarily eliminate the possibility of the coexistence of epilepsy. As a matter of fact it is not at all unusual for epileptic and psycholeptic seizures to alternate.

As to the prognosis of psycholepsy and of other psychogenetic seizures: When the attacks occur in cases of hysteria the results of treatment are excellent, and a symptomatic cure is to be expected in all cases. It is singular, indeed, that one of the most severe of

the major symptoms should be so amenable to treatment. In my own experience it has required only a few weeks to overcome the psycholeptic habit of about 95% of hysteric patients and in the majority of these the seizures have failed to recur after the first treatment. Bernheim writes: "After an experience of 20 years, I affirm that, except those confirmed cases in whom the hysterogenic automatism has become, so to speak, a cerebral localization, the crises always can be permanently dissipated, formerly I said by hypnotic suggestion; to-day I say by education of the will of the patient." (Conception Du Mot Hystérie, 1904, p. 8.)

If the attacks are symptomatic of psychasthenia the results, though good, are not so favorable as those obtained in hysteria. The difference in the prognosis of these two diseases is readily comprehended by taking into consideration the difference in the mental states characteristic of the two conditions. Cases of hysteria are eminently suitable for the application of psychotherapy because the proper suggestions are more apt to be accepted uncritically and without any resistance. Unfortunately, in psychasthenia the hypnotic state is usually secured with difficulty because of the inability of the patient to concentrate his attention by reason of the distracting influence of fear and of extraneous ideas. More or less

unconscious and antagonistic autosuggestion also interferes greatly, in these cases, both with the production of the hypnotic state, and with the acceptance of therapeutic suggestions after this state is secured. In response to each suggestion of the physician the patient seems impelled to expect the contrary to occur. If psychotherapy is adopted without attempting to induce hypnosis the same difficulties are encountered, but then they are more troublesome.

The manner in which the attacks of hysteria should be treated is rendered evident by possessing knowledge of the psychic mechanism of the conditions which may cause this clinical phenomenon. If, for example, a certain stimulus, or a certain kind of stimuli, is found to cause recurrence of the aura, either by conscious or by subconscious association of ideas, and thereby to precipitate a crisis, then one of the first principles of treatment is to abolish this tendency. The same applies to reproduction of seizures by either form of association of ideas with any other component of the dormant complex. To do this in a scientific, effective and lasting manner requires synthesis with the patient's consciousness of the dissociated and pathogenic complexes. Naturally this procedure necessitates discovery, by means of some psychoanalytic method, of the submerged complexes, and then their reintegration with consciousness by means of inducing the patient

consciously to remember the original painful experience and its emotional consequences.

Even though at first it may seem highly improbable that a patient may be cured of certain nervous manifestations by causing him to recall some painful episode in his life, it is, nevertheless, a fact which is quite generally known. In writing of this peculiarity, as it occurs in hysteria, Freud remarks: "We found, at first to our greatest surprise, *that the individual hysterical symptoms immediately disappeared without returning if we succeeded in thoroughly awakening the memories of the causal process with its accompanying effect, and if the patient circumstantially discussed the process giving free play to the effect.*" (Selected Papers on Hysteria, Trans. by A. A. Brill, 1909, p. 4.)

Let us see how Bernheim treats with simple suggestion his psycholeptic patients. Having succeeded in reproducing a crisis, he affirms positively before the patient and his students that cure is certain. Whether he has produced the crisis himself, or he is called upon to treat one which has appeared spontaneously, he dissipates the attack, usually within three minutes, by suggesting progressively the disappearance of the various symptoms. After he has provoked a crisis and then dissipated it, he commences to re-educate the patient in order to teach her to inhibit the seizures. His method of suggestion is to say to the patient:

"You see that I have been able to bring on a seizure and to stop it. I can also prevent you from having them. To prove it I will now press on the same spot where pressure provoked an attack a little while ago, and this time the crisis will not appear. You will feel, perhaps, as if one was about to appear; but it will not do so." At first he touches lightly, and then gradually increases the pressure upon the region which had been rendered hysterogenic. Often the patient becomes excited; her respiration becomes panting; she feels the globus hystericus; the crisis is imminent. He smiles, however, and reassures her by saying: "Calm yourself; the attack will not come. You will remain master of yourself." This suggestive lesson is repeated every day, and it is rare, he asserts, that cure is not obtained in three days. His object is to teach the patient to control herself and to restore to her the confidence in herself which she has lost. (Hypnotisme & Suggestion, 1910, p. 255).

There are certain only too popular forms of treatment of hysteric attacks which cannot be condemned too strongly. Many hospital internes inject apomorphine into every hysteric that comes into the receiving ward during a seizure. No doubt this procedure is very efficacious; the attack coming to a sudden termination with the onset of vomiting. But, one would have just as good reason to apply the

same treatment to a child because it cries. Beside the fact that recurrence of seizures is not prevented by forcible suppression, particularly by a punitive measure—for that is what hypodermic injection of apomorphine may be considered to be when used in the treatment of hysteria—the treatment is decidedly harmful. By reason of the suggestibility which is characteristic of hysteria, it is not at all improbable that many cases that have been treated in this manner present vomiting as a feature of subsequent attacks.

Some authors advise inhalations of ether or of chloroform in the treatment of severe hysteric attacks. Such measures must be effective, but they certainly should increase the resistance of the disease to subsequent treatment, and they remind one of the man who resorted to a sledge hammer in order to kill a flea. The administration of morphine is especially pernicious. Not only is such treatment merely palliative of the immediate attack but it establishes a harmful precedent, which may be followed by development of a drug habit. Bromides, too, are injurious, in that they have a depressing effect when administered in large doses, and they tend to produce a stuporous condition which may become elaborated into a variety of hysteric manifestations. Moreover, these drugs do not have any effect upon the convulsive habit. Valerian, asafœtida and

the like are not detrimental; neither are they beneficial, save by reason of the fact that their peculiarly offensive odor may lead the patient to believe that she is taking some powerful drug which may cure her. One well-known authority advises a restraining sheet or a straight-jacket in order to control patients with severe convulsions!

CHAPTER VIII

Alterations of Consciousness

MORBID SOMNOLENT STATES AND NARCOLEPSY. Morbid somnolence consists in a prolonged sleep-like state, while narcolepsy is characterized by periods of sudden irresistible inclination to sleep which may occur at any time, regardless of the surroundings of the patient and of what he is doing at the moment. The majority of cases of narcolepsy have probably been due to organic disease. Inasmuch as experimental investigation has resulted in reasonable doubt concerning the existence of psychic epilepsy, it is possible, also, that what is supposed to be epileptic narcolepsy is really a manifestation of hysteria. All of the few cases of typical narcolepsy that have come under my observation have been due to hysteria. One patient, a known hysteric, developed narcoleptic seizures that occurred frequently during the day and which caused her to go to sleep even while working around machinery that might have injured her, and even though, on account of her infirmity, she was in danger of losing her position. Besides other features of the case, the fact that several treatments with hypnotic suggestion effected a cure is sufficient evidence for the exclusion of organic disease. During sixteen years Weisen-

burg's patient had been subject to frequent attacks of morbid somnolence that occurred at any hour of the day. She had been known even to sleep while standing. In spite of the long duration of the affection, the patient was being rapidly cured by psychotherapy. (Jour. of Nerv. and Ment. Dis., 1909, p. 367).

There is no reason for looking upon functional narcolepsy with a degree of surprise and wonderment greater than we bestow upon psycholepsy and its mode of genesis. The mechanism is the same in each, and the manifestations of convulsive seizures differ from those of the narcoleptic attacks of hysteria only in that the former include various psychomotor phenomena in addition to a subconscious state, Objectively, hysteric narcolepsy represents only the fixation of a lapse of consciousness, while in the case of hysterogenic convulsions the primary emotional reaction is repeated more or less completely, and, during the course of repetition, perhaps becomes developed and expanded. For instance, as a reaction to some disagreeable experience a hysteric faints. Subsequently a state of hysteric narcolepsy is induced by casual references to this event, or by any stimuli which by subconscious association of ideas arouse into activity the submerged complex of the occurrence.

That psychologic gold mine, the Beauchamp case, furnishes a particularly fine instance of

trance-like states brought about by association of ideas with the memories of sensory perceptions which were contemporaneous with the onset of a syncopal attack. While preparing to retire, Miss B. had fallen into a trance. Believing that pathologic association of ideas was the cause of this occurrence, Prince inquired into the matter. The result of his investigations was as follows: "Just before going into the trance she found herself thinking of an old girl friend. How she came to be thinking of this friend she did not know, but this girl once gave her a severe nervous shock, and she has noticed that the occasion of going into trances of late years almost always has been while thinking of this girl, or while hearing certain music, or the sound of the wind, or while feeling the air blowing on her face, and other sensations, all of which are associated with this friend."

"It came about originally in this way: A long time ago, while in church and while the organist was playing the Hallelujah Chorus from Händel's Oratorio, this friend leaned towards her and told her something that gave her a severe shock,—much as if she had told her the news of someone's death. At the same time she smelled the odor of incense in the church, heard the wind blowing through the open window, and felt it on her face. All this she was distinctly conscious of at the time, as well as

of the nervous shock. Then she remembered nothing more for a few minutes. Now anything that recalls this girl, or the scene in the church to her mind,—such as the Hallelujah Chorus, the smell of incense, the sound of the wind, or the wind blowing on her face,—is apt to send her into a trance.'' (The Dissociation of a Personality, 1906, p. 88).

A typical example of the manner in which individual attacks may be reproduced as the effect of association of ideas is furnished by some incidents directly resulting from the faulty methods of hypnosigenesis formerly employed at the Salpêtrière. In this institution hysteric patients were customarily hypnotized by means of intense sensorial excitation; a flash of bright light, the sound of a gong, etc., being employed. After having been discharged from the hospital more than one patient has developed a lethargic or cataleptic state as the consequence of a sudden flash of light,—such as would be produced by the reflection of the sun from a window,—or from hearing a gong whose sound was like that of the one which formerly had been used for the purpose of inducing hypnosis. Here, then, is a true lethargic or cataleptic state which has been originated as a clinical artefact, and which, per se, cannot be differentiated from one that occurs as an actual manifestation of hysteria. When originating accidentally in the above

manner, these states are comparable with the anæsthesias of medical origin; both are fortuitous manifestations of the increased suggestibility that is characteristic of hysteria.

When cataleptic rigidity accompanies morbid somnolence the condition is designated catalepsy. By means of hypnotic suggestion cataleptic rigidity can be produced in almost all subjects. Given one in whom a somnolent state, with or without catalepsy, has been effected by this means, it would be impossible for a second physician positively to differentiate the condition itself from one which had resulted as a manifestation of hysteria. In fact, the trance-like states of hysteria in many respects are autohypnotic in nature.

An obstinate case of catalepsy was reported by Core. (Lancet, June 19, 1909.) Following his sixth epileptiform attack a boy developed somnolence with muscular rigidity. Soon after the onset of this state food that was placed in his mouth no longer was swallowed, but after feeding him once through a nasal tube no further difficulty was experienced in this respect. General contractures appeared after the tenth week. During the sixteen weeks that the lethargy continued he did not make any voluntary movements except of frowning and of withdrawal from painful stimuli, and except that his eyes remained open and he watched the actions of those around him. Several times, too, he shouted dur-

ing galvanization. Involuntary urination was persistent. Without discoverable cause rapid recovery set in after the condition had continued sixteen weeks.

It is interesting that cataleptic states, like psycholepsy and many other manifestations of hysteria, are found even among savages and the partially civilized. In connection with the epidemic of religious hysteria that attended the dissemination of the ghost-dance religion, Major MacMurray writes of the Indian Smoholla: "He falls into trances and lies rigid for considerable periods. Unbelievers have experimented by sticking needles through his flesh, cutting him with knives, and otherwise testing his sensibility to pain, without provoking any responsive action. It was asserted that he was surely dead, because blood did not flow from the wounds." (Fourteenth Annual Report of the Bureau of Ethnology, Smithsonian Institute, part 2, p. 719.)

Similar to the induction of hallucinations and delusions by suggestion, and also the ability of the subject to talk about these experiences during the hypnotic state or after it has been dispelled, is the occurrence of like phenomena during some of the trance states of hysteria. As a product of the religious fervor of the Middle Ages, and less frequently even at present, hysteria often manifested itself in the production of what is called ecstasy; a state in which a deviation from the patient's usual state of con-

sciousness is accompanied by the occurrence of hallucinatory revelations of a religious type.

Just as autosuggestion is such a powerful factor in the genesis of individual symptoms of hysteria, so it is influential in determining both the onset of such trances and the character of the revelations. Consequently, those who expected to be favored with heavenly revelations were subject to delusions or hallucinations of this nature, while other unfortunate religieuses who believed that they were possessed, and who anticipated intercourse with the devil, actually vociferated the occurrence of such proceedings during or after their trances. As a result of the religious enlightenment of modern times ecstasy has disappeared as a religious phenomenon only to become debased into being a valuable asset to the spiritualistic medium who is enabled, through the agency of autosuggestion, to bring about trance-like states during which she presumes to reveal the future, consult with the spirit world, and what not.

The most wonderful feature of prolonged hysteric somnolence is the absolute negativism of a non-insane individual who passes what may be a great portion of a life time in what to all intents is an ideational sleep. What is more remarkable than the extent of inhibition that is exercised by such patients in reference to the countless ways in which their condition may affect loved ones; which renders them prisoners

upon a bed; which is capable of reducing their consciousness to a state that is neither life nor death; which causes them to be little better than vegetating organisms? Indeed, the feats of endurance and of perverse and intense application of volition that are encountered in cases of hysteria are more comprehensible when one considers the power of morbid ideation to produce such a state of somnolence.

One of the most extraordinary cases of prolonged somnolence is that reported by Lancereaux. (La Semaine Méd., No. 10, 1904.) The somnolence of this patient developed with convulsions and general contractures after she had been subjected to intense emotional excitement at the age of 22 years. After having continued twenty years, uninterrupted except during convulsions, the lethargic state disappeared soon before death from phthisis. With the return of consciousness it was found that the patient was amnesic for the whole period of somnolence. In Oettinger's case (Jour. of Nerv. and Ment. Dis., 1908, p. 129) catheterization and enemata were necessary during a third attack of somnolence that lasted 35 days. Apomorphine and pressure on the supraorbital nerve failed to arouse him. Five days after the adoption of treatment with cold baths the somnolent condition disappeared.

The citation by Macnish (The Philosophy of Sleep, 1840, p. 245) of a case of periodic morbid somnolence that presumably was due to hysteria

is interesting because of the dependence of part of the attacks upon the varying occurrence, in time, of daybreak. Even more interesting would have been the results of a modern psychoanalysis having as one of its objects the determination of the cause of the relation between the attacks and daybreak. "One of the most extraordinary instances of excessive sleep," he writes, "is that of the Lady of Nismes, published in 1777, in the 'Memoirs of the Royal Academy of Sciences at Berlin.' Her attacks of sleep took place periodically, at sunrise and about noon. The first continued till within a short time of the accession of the second, and the second till between seven and eight in the evening—when she awoke and continued so till the next sunrise. The most extraordinary fact connected with this case is, that the first attack commenced always at daybreak, whatever might be the season of the year, and the other always immediately after twelve o'clock. During the brief interval of wakefulness which ensued shortly before noon, she took a little broth, which she had only time to do, when the second attack returned upon her, and kept her asleep till the evening. Her sleep was remarkably profound, and had all the characters of complete insensibility, with the exception of a feeble respiration, and a weak but regular movement of the pulse. The most singular fact connected with her remains to be mentioned. When the disorder had lasted six

months, and then ceased, she had an interval of perfect health for the same length of time. When it lasted one year, the subsequent interval was of equal duration. The affection at last wore gradually away; and she lived, entirely free of it, for many years after. She died in the eighty-first year of her age, of dropsy, a complaint which had no connection with her preceding disorder.''

The recognition of cases of hysteric somnolence should not be difficult. The stuporous condition of the patient is more apparent than real, for no matter how profound the state may be there remain traces of awareness of environment that can be detected by close observation. The closed eyelids may present a fine tremor like the familiar one which is seen when a hysteric is told to close her eyes during the course of a neurologic examination.

The qualities of the mental states which accompany hysteric morbid somnolence are identical with those of hypnosis; with either condition the states are ones of dissociation that vary in nature according to the individual, and which are characterized by inhibition of the conscious mental faculties with consequent emancipation of subconsciousness. The patient is not unconscious; she is aware of her surroundings in the same manner that a case of hysteric amaurosis perceives visual stimuli. No matter how deep the state of apparent coma may seem the patient

hears and understands all that is said around her, and for this reason care must be exercised in order not to make any remarks that one would not utter were the patient in her usual condition, and especially to avoid creating new manifestations, or increasing the severity of those already existing, by reason of discussing in her presence the symptoms which she has or those that might develop.

If we hypnotize someone and then remark to a third person that the subject's arm is powerless, in most instances an ideational paralysis actually develops without further suggestion. Or, the hypnotic state can be dispelled by making in the same indirect manner the remark that the subject is waking. To a less degree the same tendency exists in patients with hysteric morbid somnolence. Instead, perhaps, of making indiscreet remarks and thus aggravating the condition we can take advantage of this suggestibility, and, by veiling our suggestions, convey to the patient ideas which are favorable to recovery, without, however, allowing her to perceive that such is our intention.

Just as one who has been hypnotized may or may not remember the events of the hypnotic state so the memory of a patient who has recovered from hysteric somnolence may or may not be deficient. In order to prove that patients who have recovered from leth-

argic, narcoleptic, and cataleptic states, were really cognizant of what happened around them, and in order to demonstrate that the memories of these occurrences are not lost, but only dormant, it suffices to tap the patient's subconsciousness. There are numerous methods of doing so. The most important of these are hypnotization, hypnoidization, free association, reaction time experiments, automatic writing, crystal vision, and suggestion in the waking state.

Let us see what Janet has written concerning the mental state during hysteric somnolence: "I do not think that in these individuals the psychological phenomena have disappeared; I do not think that their sleep is a merely physical phenomenon. By many methods one can prove the existence of thoughts that continue to develop in their minds. First of all, a protracted and attentive observation very often shows you slight signs connected with thoughts. There are a few little movements of the lips, as if the subject wanted to speak, or sometimes smile, a few little transient expressions of the physiognomy, a few little movements of the hands. In certain cases, you have quite the impression that the patient chatters inwardly, and that but little is wanting for you to be able to understand him. By means of certain processes which we cannot study in detail, one can sometimes put one's

self in relation with such subjects; by merely touching them, speaking to them, it is possible to attract their attention, and then one can question them and obtain certain answers. Sometimes, in the most favorable cases, the subject will answer by speaking: sometimes he will answer by slight signs of the fingers or face. If you take his hand and ask him to press it in order to say 'yes,' sometimes you obtain nothing but movements of the eyelids and eyebrows: a slight lowering of the eyebrows will mean 'yes,' their rising will mean 'no.' And you can thus penetrate a little into his thought. Lastly, in other and more frequent cases, you will be able, after the crisis of sleep, to find again the recollection of it in states of artificially provoked somnambulism, about which I shall tell you a few words at the end of this lesson."

"By using these various means, you can ascertain that the immobility of such patients is much less physical than moral. Some have in their mind the fixed idea of sleep or death, and they realize outwardly the attitude they are thinking of. But many others have ideas that are not in the least connected with the sleep. They are seized with a profound revery, in which they contemplate scenes that present themselves before them, or indulge in an endless inward chattering. A girl of sixteen, who has been terrified by a bull coming to attack

her, has crises of sleep, with perfect immobility, during which she is appalled by the hallucination of the bull. Another, aged thirty-two, in despair at the death of a friend, relates to herself dismal stories about her own death: 'They are going to put candles near my bed; they are putting me in a little deal coffin; my friends are bringing white flowers to put on my little coffin, which is there, placed on two chairs——' and she talks thus endlessly. A man of twenty-five has been much upset by an accusation brought against him by a fellow-workman. When he meets with this individual, he becomes motionless, like one petrified, and at last he slips to the ground and lies, as if asleep, for hours together, talking inwardly about the accusation brought against him. He fancies he is before his employer, and defends himself in every way, arguing in a complicated manner as if he were before a court of justice." (Major Symptoms of Hysteria, 1906, p. 106.)

The treatment of the various kinds of alterations of consciousness is the same as that of psycholepsy: discovery and removal of the psychic causes of the seizures and recovery of dissociated memories together with fusion of these with the conscious personality of the patient.

Insomnia, the opposite of morbid somnolence, is frequent in hysteria. A peculiarity of the human mind is to exaggerate the dura-

tion of interruptions of sleep, or to overestimate the length of time before sleep appears after it is sought. How frequent it is to read on the nurse's report: "Patient slept well the whole night," and then to have the non-neurotic patient assert that he had passed a sleepless night! Even more bitterly do psychoneurotics complain of losing most of their sleep, or of not having slept at all when, in reality, such has not been the case. Uncommonly, the patient actually does not sleep, but there is sufficient mental and physical relaxation to prevent exhaustion, even though the difficulty may persist indefinitely. In some of these cases insomnia is the most prominent, or apparently even the only symptom of the disease, and it may be resistant to treatment. Usually, however, little difficulty is experienced in enabling the patient to sleep in a normal manner.

Somnambulism.—Without the participation of consciousness psychomotor activity that is adapted to some definite end, and which varies according to environmental influences, is known as somnambulism. Such a definition is most inclusive: so also has been the use of the appellation. The states of massive dissociation induced by hypnotic suggestion and which are characterized by the possibility of production by suggestion of psychomotor automatism with subsequent amnesia, have been designated states of hypnotic somnambulism. Sleep walking is

called nocturnal, or spontaneous, somnambulism, while various kinds of hysteric ambulatory automatism, whether nocturnal or diurnal, have been included under the term hysteric somnambulism. The distinctiveness of the name has been still further degraded by making it embrace the various attacks of hysteria. It seems best to limit the term morbid somnolence to a state of dissociation that is manifested by a more or less prolonged sleep-like condition; narcolepsy to periodic sleep-like seizures of short duration; somnambulism to a state of dissociation which is characterized by monoideic psychomotor automatism; ambulatory automatism and fugues to more highly developed dissociation in which, though the usual state of consciousness of the patient is in abeyance, neither his actions nor his mental state may appear abnormal to strangers; and multiple personality to the completely developed type of dissociation that results in the production of two or more distinct personalities. These limitations imply merely an arbitrary division of a scale of dissociation whose intensity varies by imperceptible gradations.

There is no good reason why the term nocturnal somnambulism should not include all kinds of motor expression of organized ideation that may occur during sleep, whether this be by walking or even by talking. An individual is not in a state of normal sleep when he gives verbal expression to subconscious ideation. That

actual walking does not occur in such cases may be dependent merely upon the character of the underlying ideation, and a person who talks one night during sleep on another occasion may walk around and perform complex acts during the same kind of state. In the first case he may be engaged in conversation with a hallucinated person and other forms of activity may not be required. In the second instance he is acting logically in accordance with the necessity imposed by subconscious ideas which happen to arise. One of Macnish's cases of sleep-walking is a good example of motor automatism dependent upon a dream: "I knew a gentleman who, in consequence of dreaming that the home was broken into by thieves, got out of bed, dropped from the window (fortunately a low one) into the street; and was a considerable distance on his way to warn the police, when he was discovered by one of them, who awoke him, and conducted him home." (The Philosophy of Sleep, p. 196.)

It is customary to speak of the motor automatisms of spontaneous somnambulism, but each of these is accompanied with sensory automatism. Not only does the sleep-walking individual present motor activity, but subconscious sensory perception takes place; otherwise, walking would be impossible and the performance of complicated acts out of the question. By reason of the character of the patient's utterances delusions and hallucinations

are evident. Their existence and their nature can be proven through the agency of psychoanalytic procedures.

In the absence of fever, toxic states and organic disease, persons who are accustomed to exhibit nocturnal somnambulism thereby display so strong a tendency towards dissociation that it seems reasonable to conclude either that indubitable evidences of hysteria would be found were careful investigation instituted, or that the disease otherwise is latent. In other words, all well developed cases of functional spontaneous somnambulism are probably hysteric in origin. As expressed by v. Bechterew (Jour. of Abnormal Psychology, vol. 1, p. 25.) walking and talking during sleep are manifestations which pass the limits of the normal and approach closely certain neurotic states.

Clinical experience shows that but few cases of nocturnal somnambulism occur in the absence of obvious symptoms of hysteria, and that in these exceptions the presence of exaggerated suggestibility and of emotionalism is decidedly significant. Conversely, with adult hysterics it is exceedingly common to elicit a history of repeated talking and walking during sleep. Just as all symptoms of hysteria are probably only exaggerations or perversions of the normal, and for the same reason that all states of dissociation are not necessarily pathologic, so it would be inadvisable to regard as

hysteric isolated instances of the utterance of a few words during sleep.

Both the mental states and the phenomena that occur during nocturnal somnambulism are duplicated by those which arise spontaneously in the course of some cases of hysteria, and which are capable of artificial production with hypnotic suggestion. In each of these conditions hallucinations and systematized negative hallucinations may occur. Personal perception is limited to what the ideation of the moment necessitates; other perceptions not being synthetized with the state of consciousness which is uppermost at the time. Hence the ordinary somnambulist does not pay any attention to those whom he many encounter, unless, in case of nocturnal somnambulism at least, their efforts are sufficiently strenuous to "awaken" him.

Hammond was fortunate enough to have the opportunity of examining a patient during the course of what evidently was an attack of hysteric somnambulism, though he does not express any opinion of its nature. "A young lady," he writes, "of great personal attractions, had the misfortune to lose her mother by death from cholera. Several other members of the family suffered from the disease, she alone escaping, though almost worn out with fatigue, excitement, and grief. A year after these events, her father removed from the West to New York, bringing her with him

and putting her at the head of his household. She had not been long in New York, before she became affected with symptoms resembling those met with in cholera. The muscles of the face were in almost constant action, and though she had not altogether lost the power to control them by her will, it was difficult for her at times to do so. She soon began to talk in her sleep, and finally was found one night by her father, as he came home, endeavoring to open the street-door. She was then, as he said, sound asleep, and had to be violently shaken to be aroused. After this she made the attempt every night to get out of bed, but was generally prevented by a nurse who slept in the same room with her, and who was awakened by the noise she made in the room."

"Her father now consulted me in regard to the case, and invited me to the house in order to witness the somnambulic acts for myself. One night, therefore, I went to his residence and waited for the expected manifestations. The nurse had received orders not to interfere with her charge on this occasion, unless it was evident that injury would result, and to notify us of the beginning of the performance."

"About twelve o'clock she came down stairs and informed us that the young lady had risen from her bed and was about to dress herself. I went up stairs, accompanied by her father, and met her in the upper hall partly dressed.

She was walking very slowly and deliberately, her head elevated, her eyes open, her lips unclosed, and her hands hanging loosely by her side. We stood aside to let her pass. Without noticing us, she descended the stairs to the parlor, we following her. Taking a match, which she had brought with her from her own room, she rubbed it several times on the under side of the marble mantelpiece until it caught fire, and then, turning on the gas, lit it. She next threw herself into an armchair and looking fixedly towards a portrait of her mother which hung over the mantelpiece. While she was in this position, I carefully examined her countenance, and performed several experiments with the view of ascertaining the condition of the senses as to activity."

"She was very pale, more so than was natural to her; her eyes were wide open and did not wink when the hand was brought suddenly in close proximity to them; the muscles of the face, which when she was awake were almost constantly in action, were now perfectly still; her pulse was regular in rhythm and force, and beat 82 per minute, and the respiration was uniform and slow."

"I held a large book between her eyes and the picture she was apparently looking at, so that she could not possibly see it. She nevertheless continued to gaze in the same direction as if no obstacle were interposed. I then made several

motions as if about to strike her in the face. She made no attempt to ward off the blows, nor did she give the slightest sign that she saw my actions. I touched the cornea of each eye with a lead-pencil I had in my hand, but even this did not make her close her eyelids. I was entirely satisfied that she did not see—at least with her eyes."

"I held a lighted sulphur-match under her nose, so that she could not avoid inhaling the sulphurous acid gas which escaped. She gave no evidence of feeling any irritation. Cologne and other perfumes, and smelling-salts likewise failed to make any obvious impression on her olfactory nerves."

"Through her partially opened mouth, I introduced a piece of bread soaked in lemon-juice. She evidently failed to perceive the sour taste. Another piece of bread, saturated with a solution of quinine, was equally ineffectual. The two pieces of bread remained in her mouth for a full minute, and were then chewed and swallowed."

"She now arose from her chair and began to pace the room in an agitated manner; she wrung her hands, sobbed, and wept violently. While she was acting in this way, I struck two books together several times so as to make loud noises close to her ears. This failed to interrupt her."

"I then took her by the hand and led her back to the chair in which she had previously been sitting. She made no resistance, but sat down

quietly and soon became perfectly calm."

"Scratching the back of her hand with a pin, pulling her hair, and pinching her face, appeared to excite no sensation."

"I then took off her slippers, and tickled the soles of her feet. She at once drew them away, but no laughter was produced. As often as this experiment was repeated, the feet were drawn up. The spinal cord was therefore awake."

"She had now been downstairs about twenty minutes. Desiring to awake her I shook her by the shoulders quite violently for several seconds, without success. I then took her head between my hands and shook it. This proved effectual in a little while. She awoke suddenly, looked around her for an instant, as if endeavoring to comprehend her situation, and then burst into a fit of hysterical sobbing. When she recovered her equanimity, she had no recollection of anything that had passed, or of having had a dream of any kind." (Sleep and Its Derangements, 1869, p. 205.)

The shock of her mother's death was the probable cause of this patient's condition. The somnambulistic seizures, typical examples of Janet's monoideic somnambulism, were evidently dependent upon a dissociated complex concerning her mother.

During attacks of somnambulism the patient's attention is concentrated upon one system of ideas to the exclusion of all others.

When we judge a somnambulist's actions entirely as they are adapted to the expression and realization of the one system of ideas nothing abnormal is noticeable. Thus Hammond's patient was unable to perceive any stimulus which was not related to the death of her mother, and, on the other hand, when she was left to herself, the character of her actions did not differ materially from those of a person in full possession of consciousness.

Any hysteric trance-like state that is associated with monoideic automatism may be considered somnambulistic whether it appears during the day or if it develops while the patient has been asleep. As a matter of fact even the convulsive seizures of hysteria are, as Janet has contended, states of monoideic, or, in some cases, polyideic somnambulism; the patient merely living through again some former experience. Moreover, convulsive attacks may serve as the point of departure for the elaboration of more highly developed types of dissociation of consciousness.

In addition to psycholeptic seizures Sallie S. was subject to occasional somnambulistic attacks. During one of these she was taken by her husband to the office of their physician. While in the office she cried, and did not appear to be entirely conscious of her surroundings. Indeed, she insisted that the physician was unknown to her. After returning home and recovering her

usual state of consciousness she exhibited amnesia for the whole period of the crisis, and, consequently, she denied having been out of the house. At no time did she believe either her husband or her physician when they related what had really occurred. While in the hypnotic state she remembered all the events of her crisis. It appears that the seizure was consequent upon a state of profound meditation concerning the illness and death of her first child, and the crying represented her grief on this occasion. Her attention being concentrated upon these painful memories she was oblivious to most extraneous perceptions and ideas.

The lack of recognition of environment exhibited by somnambulistic patients is similar to the normal deficiency of conscious recognition of what is perceived but not attended to when one has his attention deeply concentrated.

Ambulatory Automatism and Fugues. The more complete the dissociation of consciousness, the more closely do the resultant mental states and their physical expression resemble normal standards. When a person is actuated by one idea to the exclusion of all others, his manner of reacting to environment is necessarily defective. Whereas, the greater the amount of cleavage, the better the foundation with which to enter into external relations. A necessary corollary is that the less the amount of dissociation the more numerous must be hallucinations,

and particularly "negative hallucinations." Following the terminology of Janet, let us apply the designation polyideic somnambulism to cases presenting automatisms dependent upon the cleavage of more than one system of memories. With almost imperceptible gradations, cases might be adduced beginning with monoideic somnambulism and ascending the scale of dissociation to attain the most highly evolved type of the affection—multiple personality. Hand in hand with the evolution of dissociation, or the development of parasitic and independent personalities, is the approach towards the normal of the reactions of the individual. Polyideic somnambulism, then, is characterized by adaptability to environment that is far greater than that of the monoideic variety.

The case of Mr. X., which was mentioned in the section dealing with asthma, was complicated by an interesting type of somnambulism whose recurrences were discovered to have been provoked by association of ideas, and whose origin was not as incomprehensible as at first one would believe. The case illustrates, also, the gradual evolution of a highly developed form of polyideic somnambulism—one which approached closely veritable multiple personality—from what was originally a simple type of monoideic somnambulism. In order to describe these manifestations allow me to quote some selected paragraphs from the original re-

port: "Prolonged attacks of coughing, terminating with the expectoration of glairy mucus and the immediate onset of a trance-like state that lasted from fifteen minutes to three hours, first appeared in 1905. It was noticed that these seizures, occurring about ten times annually, were always induced by excitement or mental stress. Often he walked around during the somnambulistic stage, guiding himself by tactual perceptions, but he seemed to pay no attention to what happened, save that he occasionally answered questions. Though his eyes usually remained open and fixed he never appeared to see anything. He was often observed passing his fingers over the crystal of his watch; and if the time of one of his engagements was approaching, as determined by him in this manner, he was usually able to bring about reversion to the personality normal to him.* At the termination of one of these abnormal states of consciousness he would be bewildered for a short time and was never able to

*Believing that the watch was superfluous and that his ability to recognize the time was dependent upon subconscious registration of the passage of time, Mr. X. was tested with a watch which he knew had been set incorrectly. He was unable to detect the position of the hands when tested in this manner, yet, a few minutes before, he had given out the time within three minutes of being correct, even though the watch which he had palpated had been concealed from his view, there was not any clock in the room, and he had not seen a watch, or clock, for at least three quarters of an hour. This ability subconsciously to recognize the passage of time is the means by which some fortunate individuals are able to waken at whatever time they desired before going to sleep.

remember what had occurred during their continuance."

"In addition to the type of seizure just described a variation developed in 1906. Following an emotional shock, worry, or an excessive amount of the mental application incidental to the pursuit of his profession, a severe paroxysm of coughing might appear, succeeded by a stuporous condition lasting from one to fifteen minutes. After the cessation of this latter state he became very loquacious, holding 'telephonic' conversations in which he talked of his business affairs. Though he paid no attention to his surroundings he occasionally answered, relevantly or not, questions that were addressed to him. The fact that he is known to have displayed resistance to passive movements, together with other evidences of opposition, would tend to indicate the presence of negativism on these occasions. During one of these states of dissociation he defeated Dr. Kulp at a game of chess in which he followed the plays only by tactual perceptions. In the course of the two years previous to the employment of hypnotic methods of treatment, about twelve attacks of this type occurred, each of which was followed by amnesia localized to the period of dissociation."

"Early in the year 1908 Dr. Kulp, in order to treat locally an obstinate inflammation of the nasopharynx, passed into the patient's

posterior nares an applicator on which was some cotton saturated with a solution of iodine in glycerine. At once there appeared prolonged and severe coughing which terminated in a somnambulistic condition similar in nature to those already described. The possibility of this sequence being merely coincidental was eliminated by ascertaining that it occurred whenever an applicator was passed into the posterior nares, even though no solutions were employed. After determining this causality the applications were of necessity discontinued."

"June 4, 1908, the patient, after having lost much sleep from coughing during the previous night left home at 9.30 a. m. He was afterwards informed that when he entered his office he acted and talked strangely for a short time prior to going into his private room, where he was found asleep at 2 p. m. Upon being awakened at this time he was in his usual state of consciousness and knew nothing of what had occurred following his departure from home. While out for lunch, and without having had any emotional provocation or precursory attack of coughing of which he was afterwards consciously aware, the secondary state again developed and continued until his return to the office at about 4 p. m. He was never able to find out the nature of his actions during this second attack of ambulatory automatism."

"Alarmed by these happenings he went home

and slept until 6 p. m., when he woke up in the secondary state. At his lodge, in the evening, he talked in a sensible manner to the secretary about matters of importance, and then conferred a degree upon some of the members. Later, some of his friends noticed something peculiar in his condition and advised him to go home. Thereupon he walked home, and his wife afterwards reported that upon going to bed he had an attack of coughing, followed by one of his somnambulistic states of loquaciousness which lasted for two hours. The next day, being in his usual state, he was unable to remember anything which had happened the previous evening except the little he acquired through isolated memory flashes."

"For the purpose of causing a somnambulistic attack an application was made to his posterior nares. There appeared immediately a violent paroxysm of uninterrupted coughing, similar to that of pertussis, associated with clonic movements, almost epileptic in nature, of the arms. In the efforts of coughing the patient flexed his body extremely and appeared to contract every voluntary muscle. After coughing about fifty times he became exhausted, and the cough ceased. Sitting with his head in his hands, his breathing became deeper, and Cheyne-Stokes type of respiration appeared, followed, a couple of minutes after the last cough, by the onset of unconsciousness.

My attempt at experimentation having as its end the determination of the character of his state, caused, or was coincidental with the return of consciousness. On account of his great exhaustion it was deemed inadvisable to cause a recurrence of the paroxysm; consequently I was unable to demonstrate experimentally the auto-hypnotic nature of the final stage."

"During the same evening he was readily hypnotized, for the first time, in about one minute. After I had made the suggestion that he should 'awaken,' about a half hour later, his first question was: 'When are you going to begin?' The artificial hypnotic dissociation was so complete that he was not aware of having been hypnotized; though, by reason of his amnesia for all the suggestions that had been made, it was apparent that the hypnotic state had actually been produced."

"While he was in the hypnotic state, during his third visit—November 23, 1908—an effort was made to determine the causes, of which he was consciously unaware, of his manifestations, with the following result: Being frequently awakened from a sound sleep by the onset of an attack of asthma, he acquired the habit of resorting to the inhalation of fumes from a burning asthma powder, while sitting on the side of the bed with his head in his hands. The fumes irritated his larynx and this, in addition to the usual postasthmatic tendency to cough, produced a

severe paroxysm of coughing. The great exhaustion following the paroxysm, together with the soothing effects of relief from dyspnœa and the natural tendency to fall asleep again after having been awakened in the middle of the night, caused him to fall asleep while sitting there with his head in his hands. The repetition of this sequence, almost every night, soon resulted in the formation of a number of powerful associations, and there appeared gradually a tendency to fall asleep during the day, after the use of his asthma powders. This experience having occurred many times a psychic short cut, like those found so often in the study of the mechanism of hysteric accidents, became established, and the more highly elaborated auto-hypnotic or somnambulistic condition began to appear following a severe cough even without the asthma powder having been used."

"The local irritation caused by the application to his posterior nares resembled the irritation due to inhalation of the fumes of his asthma powder; the paroxysm of coughing and its consequences was therefore the result of association of ideas."

"The beneficial results of suggestion during the hypnotic state become apparent immediately following his first treatment. During his second visit he asserted that he had slept deeply three nights out of five without having been awakened by an attack of asthma. In addition to this

unusual state of affairs he was able to sleep with one pillow less under his head."

"While under hypnosis the second time, the suggestion was made, among others, that paroxysms of coughing and somnambulistic attacks would never occur again following applications to his posterior nares. After being aroused from the hypnotic state he was told that an application was to be made. Not being consciously aware of any of the suggestions that had been made, he prepared for the usual consequences. Much to his surprise there occurred nothing but a few coughs."

"Since Mr. X. first came under my care — November 13, 1908 — he has been hypnotized only eight times. At present he sleeps well without being awakened by asthmatic attacks, and instead of having paroxysms of coughing when he arises in the morning, only a few coughs occur. In fact he now has no paroxysms whatever, and since his first treatment he has not had a single one of any of his various somnambulistic attacks." (Jour. of Abnormal Psychology, Aug. — Sept., 1909.)

Somewhat similar to one of the exciting causes of the attacks of Mr. X. was one of those of a case briefly mentioned by Gowers; the patient all of his life being subject to narcoleptic attacks whose exciting causes included the passage of a probe into a nasal fistula.

During highly elaborated somnambulistic

states hysteric patients occasionally run away from home. Such flights—designated fugues, or ambulatory automatism—are the realization of former vague desires. Long continued voluntary suppression of unfulfilled desire leads to dissociation of a complex of which it is the nucleus. If a massive dissociation should occur at any time this complex would tend to assume activity that had for its end accomplishment of the old longing; whether this be craving for travel for its own sake, or simply desire to run away as a pusillanimous means of escape from relatively great responsibilities and difficulties.

When the ordinary annoyances of home life become too overwhelming for the sensitive and incompetent hysteric to sustain, the thought of escape from these tribulations naturally must arise. As the hysteric is impulsive—as he tends without critical, conscious reflection to act upon ideas as they arise—the thought of evasion acts with all the force that autosuggestion is capable of exerting in this disease. Finally, as the consequence of a relatively severe stress, or, in fact, even of a minor one that serves as the last straw, a superior kind of somnambulistic condition develops, and in response to an irresistible and unquestioned impulse the flight is accomplished. As judged by ordinary standards the fugue of hysteria is irrational in that the manifestation is out of all proportion to the provocation.

Fugues are attended by a distinct alteration in the personality of the patient; his habits, temperament, likes and dislikes, and even his name becoming changed. Just as during hysteric attacks the actions and verbal utterances reflect the delusions and hallucinations of the patient, so the conduct during fugues is that which is natural to the patient, but which formerly had been suppressed in the attempt to conform to the restraints of home life and to the manners and customs imposed by civilization and environment.

Though his past life may be forgotten—i. e. the memories are incapable of volitional reproduction during the existence of the new personality—yet isolated memories at times arise above the level of his new state of consciousness, and, therefore, his actions are not those of one who really has had all the memories of his preceding life blotted out. In addition to these memory flashes what may be called general knowledge usually is common to both states. It is by reason of these legacies from his former life that he is enabled to conduct himself in a manner that does not seem peculiar, or abnormal, to those with whom he comes into contact; otherwise, soon he would be committed to jail, or a hospital. But, as a considerable portion of his memories are submerged the new state must be distinctly inferior to the old one. In describing the sec-

ondary state of Ansel Bourne, Professor James characterizes it as a "rather shrunken, dejected, and amnesic extract of Mr. Bourne himself."

Inasmuch as the specific memories pertaining to the patient's usual personality and those of his state of consciousness during a fugue are mutually incompatible he is not cognizant in either state of the personal memories of the other. This is readily comprehended when we consider that often the patient had been subduing for many months or years the vague desire to escape from troubles, for the reason that in his usual state a flight would have been looked upon as cowardly and despicable, had he permitted himself seriously to contemplate this procedure. Consequently, when the state of massive dissociation develops, and the fugue becomes a fact, he knows neither why he is running away, nor even that he is doing so.

Besides those occurring as manifestations of hysteria, fugues are believed to result less frequently from trauma, alcoholic and other toxic states, degeneracy, and epilepsy. In most of the cases which follow trauma the injury acts only as an exciting cause, and the fugue itself is hysteric in character just as the post-traumatic paralysis that is encountered so frequently in hysteria is usually a psychic paralysis, and not one which is a direct consequence of actual injury to the part. The fugues of

degeneracy differ from those of hysteria in that the flight is not accompanied by an altered state of consciousness, and like the psychasthenic fugue, for several days or more before leaving home the patient may feel the growth of the impulsion to run away, and, accordingly, preparations even may be made for the "get away." The fugue of either of these conditions is voluntary or semi-voluntary, while that of hysteria, on the other hand, occurs suddenly without any conscious preparations, is effected during a deviation from the usual state of consciousness of the patient, and is followed by amnesia for the whole period of its existence.

As the record of an actual case is far more valuable than pages of generalizations allow me to quote William James' well known Ansel Bourne case of ambulatory automatism and then one of my own cases illustrating the fugue of degeneracy:

"The Rev. Ansel Bourne, of Greene, R. I., was brought up to the trade of a carpenter; but, in consequence of a sudden temporary loss of sight and hearing under very peculiar circumstances, he became converted from Atheism to Christianity just before his thirtieth year, and has since that time for the most part lived the life of an itinerant preacher. He has been subject to headaches and temporary fits of depression of spirits during most of his life, and has had a few fits of unconsciousness lasting

an hour or less. He also has a region of somewhat diminished cutaneous sensibility on the left thigh. Otherwise his health is good, and his muscular strength and endurance excellent. He is of a firm and self-reliant disposition, a man whose yea is yea and his nay, nay; and his character for uprightness is such in the community that no person who knows him will for a moment admit the possibility of his case not being genuine."

"On January 17, 1887, he drew 551 dollars from a bank in Providence with which to pay for a certain lot of land in Greene, paid certain bills, and got into a Pawtucket horse car. This is the last incident which he remembers. He did not return home that day and nothing was heard of him for two months. He was published in the papers as missing, and foul play being suspected, the police sought in vain his whereabouts. On the morning of March 14, however, at Norristown, Pennsylvania, a man calling himself A. J. Brown, who had rented a small shop six weeks previously, stocked it with stationery, confectionery, fruit and small articles, and carried on his quiet trade without seeming to any one unnatural or eccentric, woke up in a fright and called in the people of the house to tell him where he was. He said that his name was Ansel Bourne, that he was entirely ignorant of Norristown, that he knew nothing of shop-keeping, and that the last thing he remembered—it

seemed only yesterday—was drawing the money from the bank, etc., in Providence. He would not believe that two months had elapsed. The people of the house thought him insane; and so, at first, did Dr. Louis H. Read, whom they called in to see him. But on telegraphing to Providence, confirmatory messages came, and presently his nephew, Mr. Andrew Harris, arrived upon the scene, made everything straight, and took him home. He was very weak, having lost apparently over twenty pounds of flesh during his escapade, and had such a horror of the idea of the candy-store that he refused to set foot in it again."

"The first two weeks of the period remained unaccounted for, as he had no memory, after he had once resumed his normal personality, of any part of the time, and no one who knew him seems to have seen him after he left home. The remarkable part of the change is, of course, the peculiar occupation which the so-called Brown indulged in. Mr. Bourne had never in his life had the slightest contact with trade. 'Brown' was described by the neighbors as taciturn, orderly in his habits, and in no way queer. He went to Philadelphia several times; replenished his stock; cooked for himself in the back shop, where he also slept; went regularly to church; and once at a prayer-meeting made what was considered by the hearers a good address, in the course of which he related an incident

which he had witnessed in his natural state of Bourne."

"This was all that was known of the case up to June 1890, when I induced Mr. Bourne to submit to hypnotism, so as to see whether, in the hypnotic trance, his 'Brown' memory would not come back. It did so with surprising readiness; so much so indeed that it proved quite impossible to make him whilst in the hypnosis remember any of the facts of his normal life. He had heard of Ansel Bourne, but 'didn't know as he had ever met the man.' When confronted with Mrs. Bourne he said that he had 'never seen the woman before,' etc. On the other hand, he told of his peregrinations during the lost fortnight, and gave all sorts of details about the Norristown episode. The whole thing was prosaic enough; and the Brown-personality seems to be nothing but a rather shrunken, dejected, and amnesic extract of Mr. Bourne himself. He gave no motive for the wandering except that there was 'trouble back there' and he 'wanted rest.' During the trance he looks old, the corners of his mouth are drawn down, his voice is slow and weak, and he sits screening his eyes and trying vainly to remember what lay before and after the two months of the Brown experience. 'I'm all hedged in,' he says: 'I can't get out at either end. I don't know what set me down in that Pawtucket horse-car, and I don't know how I

ever left that store, or what became of it.' His eyes are practically normal, and all his sensibilities (save for tardier response) about the same in hypnosis as in waking. I had hoped by suggestion, etc., to run the two personalities into one, and make the memories continuous, but no artifice would avail to accomplish this, and Mr. Bourne's skull to-day still covers two distinct personal selves.'' (The Principles of Psychology, vol. 1, p. 391, 1905.)

A psychasthenic boy of 17 years had had about twenty fugues. The first of these occurred in his eleventh year and followed a quarrel with his aunt, who accused him of stealing some money from her. The flight, he stated, was accomplished of his own free will. He remained away about one week before being discovered by the police and sent home. During the week he had walked the streets looking for work, and at night he slept in wagons and stables. The second flight took place one week after his return from the first one. Having run away eight times in the space of one year he was sent to a state institution where he remained nineteen months. Later he was confined eight months in the same institution. Of the large number of his fugues he was brought back by the police in all but two, whose termination was effected by a sudden and apparently causeless desire to return home. The only time that he stole was to obtain money

for a flight, and his thefts were limited to members of his family. Several days before each fugue he became irritable and moody. The first one was entirely voluntary, he stated, while the others resulted from impulses which he could not resist, though he did not exert himself much to do so. Through the agency of hypnotic suggestion all of his many psychasthenic symptoms disappeared, but, after the fourth treatment, he failed to return, and several weeks later he had a fugue which continued for five weeks.

The last fugue before coming under my care illustrates the voluntary, or semi-voluntary, nature of those due to degeneracy. Several days before the evasion he accidentally discovered some money belonging to his father. On arising several mornings later he was conscious of an impulsion, which he tried to suppress, to run away. Just before going to work he appropriated the money which he had found and then boarded a trolley that went past the shop where he was employed. While in the car something said to him, as he expressed it, "Now is your chance." Acting on this impulse he remained in the car and went to a city thirty miles distant. About a week later he felt that he was not acting right so he returned home.

Formerly, all fugues were supposed to be manifestations of epilepsy, and, as such, they were designated psychic epilepsy. Gradually

the tendency has been evolved to ascribe to epilepsy but few of the cases, and some authorities deny that the different phenomena which are included under this term have any other relation to epilepsy than through their superficial resemblance to certain features of this disease. Among others who have enlisted modern psychoanalytic methods in their investigations of psychic epilepsy, Sidis denies that epilepsy has any influence in the causation of these alterations of consciousness. He classifies as recurrent psychomotor states of dissociation all of the cases known as psychic epilepsy, or those exhibiting "psychic equivalents" of an epileptic attack. Rigid analysis of such cases, he states, shows that they have nothing to do with epilepsy even though they may be found in association with this disease. (Boston Med. and Surg. Jour., Mar. 14, 1907.)

As hysteria and epilepsy often coexist veritable fugues may occur in patients who are subject to indubitable epileptic convulsions without, however, signifying that both manifestations are epileptic in origin.

Like the fact that on the basis of the seizure itself it is impossible to differentiate many cases of hysteric psycholepsy from epileptic convulsions, it has been shown by J. W. Courtney that the supposed differential signs between the fugues of hysteria and those of epilepsy are fallacious. He concluded that an epileptic

fugue per se does not possess any peculiarities which distinguish it from many of the flights of hysteria, and for this reason the diagnosis between the two conditions should not be attempted on the characteristics of the fugue alone. (Jour. of Abnormal Psych., vol. 1, p. 123.) In an exhaustive paper on ambulatory automatism Patrick writes: "I do not wish to be understood as doubting the existence of epileptic wandering. Unequivocal cases are sufficiently numerous in the literature. But I do insist that this diagnosis has been made too often." (Jour. of Nerv. and Ment. Dis., June. 1907.)

CHAPTER IX

Multiple Personality and Amnesia

WELL developed cases of multiple personality are exceedingly rare. There are less than fifty recorded cases that possess any value, and of these only several have been carefully studied in the light of our beginning comprehension of this phenomenon. In view, then, of the rarity of the affection, and of the fact that there is much excellent literature devoted to the subject, it seems inadvisable in this work to attempt more than to summarize several of the more interesting cases and briefly to describe the condition.

The dividing line between ambulatory automatism and multiple personality is purely arbitrary; a fugue being merely a lower grade of dissociation that eventuates in a flight. On the other hand, many of the cases of multiple personality exhibited states of consciousness far inferior, for instance, to that of the secondary state of Ansel Bourne. One might well hesitate before deciding whether the following case, reported by Edward E. Mayer, should be classified as a prolonged fugue or as an instance of dual personality. The fact that two brief fugues interrupted the course of the secondary state, and that two occurred subsequently, is

somewhat in favor of designating the case as one of fugues. When twenty-four years of age the patient had been in a railroad wreck. Seventeen years later, while he was suffering acute pain, a daughter accidentally overturned a lamp. As he tried to catch it he murmured: "Oh! my head" and fell unconscious. Upon recovering consciousness, twenty-four hours later, his first question was whether he was much hurt. Then he asked his wife what hospital he was in, and if she was the nurse. With difficulty he was convinced that he was married. the father of four children, and that seventeen years had passed since the train wreck. Upon inquiry it was evident, too, that in his secondary state he had possessed little knowledge of his life previous to the accident. Having reverted to the primary state he began to worry over the possibility of being declared insane. Sixteen days after the reversion he had a fugue which carried him thirty miles away from home during nine hours. The following day he disappeared again and nothing further was heard from him. (Jour. of the A. M. A., 1901-2—1601.)

Multiple personality consists in the alternation of two or more distinct personalities the sum of whose distinctive characteristics roughly speaking is equivalent to what should be the normal personality of the individual. For instance, the primary personality of Mayer's case

cannot be regarded normal for the reason that the memories of seventeen years were lacking. Dissociation of the personality implies a division of the personality, and, consequently, the faculties of one state often are at the expense of another. In other words, they are complementary. For this reason a hysteric is never cured, no matter what may have been her symptoms of the disease, unless all of her pathologically dissociated memories have been restored to consciousness.

Multiple personality may be consequent upon synthesis, independently of consciousness, of gradually developing systems of dissociation of lesser degree, or it may appear suddenly after some severe shock or prolonged mental stress. Often there occurs a gradually increasing amount of dissociation that manifests itself only as a slowly progressive hysteria, or neurasthenia, when suddenly the patient reverts to an older state of personality with the consequence that she has had blotted out the memories of a considerable portion of her life. It is during the growth of the secondary personality that the patient is most apt to consult a physician, and she is treated for neurasthenia or hysteria. Then, when reversion occurs, the mistake is naturally made to regard as abnormal what really approximates more closely the normal personality; the reason for this being that in the more abnormal state the patient's memory

included the events of her whole life, but, while in the primary state, memory is deficient for the neurasthenic or hysteric period.

In several of the early instances a patient with symptoms of hysteria, but in whom the existence of multiple personality was not suspected, was hypnotized for the purpose of attempting to remove symptoms. Finding that the supposed hypnotic state was always coincident with disappearance of the symptoms, and that while in this condition the patient appeared to be normal and well, what was believed to be a hypnotic state was allowed to persist when, in reality, it was the normal personality, except for loss of memories of the secondary state. The case of Marcelline is instructive and it illustrates the above misinterpretation:

Almost in a dying condition as a result of long continued hysteric anorexia and vomiting Marcelline was brought to the hospital. Moreover, she had urinary retention, her skin and mucus membranes were completely anæsthetic, vision and hearing were much impaired, and intellectually she was deficient. Forced feeding being productive of vomiting, and her condition being serious, Jules Janet decided to resort to hypnotism. Having hypnotized her and thus afforded her an opportunity to eat without subsequent vomiting it was found that all of her symptoms had disappeared. The supposed

hypnotic state was dispelled because it was thought that being an artificial state this was necessary. Immediately all of her former symptoms returned, and, in addition, she was amnesic for the more nearly normal state which had been procured. After this the new personality was frequently induced in order to nourish her. This state, however, continued to be regarded as hypnotic, and what really was a secondary personality with many symptoms of major hysteria was believed to be normal. Later, the "hypnotic" personality was allowed to persist for days at a time in order to avoid the necessity of going through the processes of hypnotizing her for each meal. One day she was taken home by her parents who had found her in the artificially induced state and, consequently, had thought that she had been cured.

Succeeding her removal from the hospital the old state with its hysteric symptoms returned every few weeks, so that she was brought back to the hospital, solely to be hypnotized, many times during the following fifteen years before her death from tuberculosis. As each time she reverted to the hysteric personality her memory was deficient for all the preceding states of the primary personality, by the end of five years she was ignorant, when in the hysteric state, of almost all of her existence since her removal from the hospital. At the end of the fifth year the experiment was tried of allowing her to re-

main in the secondary state several days in order to ascertain if this deficit was more apparent than real. Because of the many serious blunders that she made in consequence of her ignorance of her actions and life during these five years it was necessary to resort again to hypnotic procedures. (Mental State of Hysterical, p. 433.) In this case, then, the patient first came under observation during the existence of a secondary personality which was believed to be the normal one. By means of suggestion what approximated the normal personality was secured instead of what should have been the hypnotic state, for which it was mistaken.

Usually certain knowledge is common to all the personalities of a patient. Thus a man who in the secondary state is unable to remember his name, or any of the incidents of his past life, almost invariably possesses his former command of language, and his general knowledge remains unimpaired. Figuratively speaking, it is as if the line of cleavage deprived the new state only of that specific knowledge pertaining to the former ego; the new personality being the product of new experiences and of the suppressed tendencies of the original personality. In several instances, however, the birth of the secondary personality revealed a mental state comparable with that of a new born infant. In such cases the secondary per-

sonality was devoid of all the knowledge that had been acquired by the primary one, and the alternating personalities had nothing in common. The best example of such a type of dissociation is afforded by the Hanna case:

While alighting from his carriage the Rev. Thomas Carson Hanna made a misstep and fell, striking his head. Upon recovering consciousness, two hours later, his mind was a blank. Not only had he lost the faculty of speech, but even the ability to recognize objects and persons. He was unable to appreciate distance, form, size, time, etc., and he did not even know how to use his muscles. Though the feeling of hunger was not affected yet he could not interpret the craving, and he was ignorant both of the purpose of food and of the acts of mastication and deglutition. Spatial conceptions having been lost he attempted to grasp a tree seen through a window. Among other curious mistakes he thought a man on a bicycle constituted one living being, while a second man and the horse and carriage that he was driving were another living being of a different kind. In spite of his total amnesia he was very intelligent. At the end of one week of instruction he was able to read, and six weeks after the accident he could talk intelligently. His dreams, derived from experiences of the normal personality, were so vivid that it seemed as if he lived over again past occurrences without, however,

recognizing them as such. With hypnoidization the same kind of hallucinations from the past could be obtained. Conservation of the memories of the primary personality was shown also by his ability to solve geometrical problems without being able to explain how he did so.

It was thought that a large number of stimuli whose nature differed from that to which the new personality was accustomed might raise above the threshold of consciousness the submerged memories of his past life. If successful, such a procedure would represent fusion of the two personalities. Accordingly, he was taken to New York and subjected to a lively round of amusements. Two hours after having retired he woke as the normal Mr. Hanna, who was much surprised to find himself among strangers, and in strange quarters. He thought that he had been the victim of some practical joke. During the following six days the two personalities alternated until finally, during a psychic crisis, fusion occurred — the two states became synthetized. (Sidis and Goodhart: Multiple Personality, 1905.)

With this patient the two personalities had been entirely ignorant of one another. Not any knowledge was held in common. Each alternation was preceded by a stuporous state that was termed hypnoleptic. Apropos to this state Sidis formulated the following law: "*no*

mental alternation without some form of an intermediate sleeping state in general and of a hypnoleptic state in particular, especially in the transition from the primary to the secondary moment." "*The hypnoleptic state,*" he continues, "*is the reproduction of the original attack which brought about the state of double or multiple consciousness.*" It would seem, however, that such a twilight state objectively is not always appreciable in all cases, though no doubt it exists subjectively. In the Beauchamp case, for instance, Prince often failed at the time to detect an alternation that took place in his presence.

The Hanna case can be regarded as an instance of a cure of dissolution of personality for the reason that, after having recovered, Mr. Hanna possessed the memories of both states. That the synthesis of the two personalities was not merely temporary is shown by Mr. Hanna's statement, twelve years after the accident, that he had remained well. (Ladies' Home Journal, Nov., 1909.)

Somewhat resembling the Hanna case is that of Mary Reynolds, recorded by S. Weir Mitchell. (Trans. of the Coll. of Physic. of Phila., April 4, 1888.) Mary Reynolds had been subject to various manifestations of hysteria, when, one day, she woke from a prolonged sleep in a state of complete amnesia for her former life. Like Mr. Hanna, when his

secondary personality had just appeared, she was as a new born babe, and did not even recognize her parents. She, too, learned to read and write in a few weeks. Formerly Miss Reynolds had been reserved, and melancholic, but the alternation of personality was accompanied by an alteration of disposition, and she became cheerful, merry and social. The secondary state having continued five weeks she woke, one morning, in her primary state greatly surprised to find so many changes had occurred in her environment in the course of what she supposed to be one night. She was entirely unconscious of the previous five weeks. After a few more weeks she woke again in the secondary state to take up her life and memories just where they had been interrupted by the appearance of the primary state. The alternations continued to take place for fifteen or sixteen years, but they finally ceased, leaving her permanently in the secondary state at the age of thirty-five or thirty-six.

As lapses of memory play such an important part in the progress of a case of dissociated personality it might be thought that the syndrome is merely a manifestation of systems of localized amnesias. This, however, does not appear to be the case, for while embarrassments of memory are responsible for many of the phenomena of the condition, alternating periods of amnesia cannot of themselves pro-

duce true variations in the personality of the patient — the variations of tastes, temperament, moral characteristics, and of all the other factors which enter into the make-up of what is called personality. As a matter of fact amnesia is not even a necessary accompaniment of dissociation of the personality just as succeeding amnesia is not essential to the hypnotic state.

The psychic nature of manifestations of hysteria is made strikingly apparent in many of the instances of multiple personality. For instance, Louis Vivé, whose moral character had been none too good, and who had been committed for theft, was bitten by a viper with the consequence that he had a convulsion followed by the appearance of a new personality which lasted three years. During the existence of this secondary personality the memory of his previous life was not greatly impaired, his moral character changed decidedly for the better, and he was paraplegic, and subject to hysteric convulsions. At the expiration of the third year a prolonged convulsive seizure ushered in a new personality, and immediately the paraplegia disappeared, to be replaced by hemiplegia and hemianæsthesia. In this third state he was amnesic for the whole of the second one, and morally he had so deteriorated that he drank, stole, and was quarrelsome. The case was further complicated by the develop-

ment of other personalities with corresponding variations of the memory, morals, and physical manifestations.

Beginning with morbid somnolence and ending with multiple personality all the different kinds of alterations of consciousness that occur as manifestations of hysteria can be reproduced also by means of suggestion. That the phenomena of hyposis are due to an artificially induced dissociation of consciousness has been quite generally accepted as the most plausible explanation. In certain individuals it is possible to obtain so highly a developed state of what is called hypnotic somnambulism that to the uninitiated observer the state of the subject apparently differs in no way from what might be regarded normal. While in this secondary state what constitutes the personality of the subject spontaneously may have become changed, or quite readily such alterations may be brought about through the agency of suggestion. In either case the condition is a true secondary personality of hypnotic origin. With certain of these cases the new personality could be caused to persist indefinitely. Thus, a French physician, with all the enthusiasm of the early mesmerizers, allowed the hypnotic personalities of two sisters to continue for three months. Upon being caused to revert to their usual personalities neither of these girls could remember anything which had occurred during the existence of the secondary states.

A well developed case of multiple personality originating from the abuse of hypnotism is that of Pierre Janet's patient Madame B. This patient had possessed a good foundation for the development of multiple personality in that she had been subject to attacks of nocturnal somnambulism since her third year. After having attained the age of sixteen years she had constantly been used by laymen and physicians as a subject for hypnosis. The hypnotic state had been induced so frequently, and while in this state she had been subjected to so much experimentation and clinical education, that a well organized hypnotic personality—Léontine—had become elaborated; one which differed completely from Léonie, the "normal" Madame B. Léonie, a poor peasant, was a serious, timid, melancholy woman, while Léontine was gay, noisy, restless, and ironical. The memory of Léonie was impaired—she was amnesic for all the periods when Madame B.'s other personalities were uppermost. Though Léontine's memory included that of Léonie, she separated the two states and looked upon as her own only the memories of events which occurred when her own personality controlled the body of Madame B. Thus Léontine considered her husband as belonging to "that good woman" "the other" who "is not I, she is too stupid"; but the children she called her own because they were born while Madame B. was

in a hypnotic state; induced for the purpose of rendering the event painless. When Léontine was subjected to further hypnotic procedures there appeared a third personality, known as Léonore, who did not wish to be mistaken for that "good, but stupid, woman" Léonie nor for the "foolish babbler" Léontine. The Léonore personality seemed superior to either of the others both in respect to character and to memory, which included the whole of Madame B.'s life. (Révue Philosophique, Mar. 1888. The above account is based upon the abstracts of Prof. James and of F. W. H. Myers.)

The most interesting of the cases of psychic polyzoism is the complex Beauchamp case which was studied so exhaustively by Morton Prince. It is the careful analysis of this, and of other similar cases, that has been productive of much valuable information concerning functional amnesia, pathogenic submerged memory complexes, association of ideas, the subconscious, and many other of the problems of morbid psychology. (The Dissociation of a Personality, 1906.)

In her early life Miss Beauchamp had been decidedly neurotic. One day, in 1893, she was subjected to a number of stresses culminating in an unpleasant experience whose importance was greatly exaggerated by her, and which resulted in the birth of a new personality—B. I. Like Léontine, and the secondary personalities of Louis Vivé, and of Marcelline, B. I did not present any gross

impairment of the memories of her previous life. Being the subject of a decided neurasthenic-like state she came under the care of Dr. Prince in 1898. Resorting to hypnosis, Prince secured a somnambulistic state which was superior to the B. I personality and which he utilized as a means of obtaining the beneficial effects of suggestion. Soon, however, a new personality—Sally—sprung out of the hypnotic state without having been produced artificially by suggestion. This new personality apparently had been a co-conscious one the whole of Miss B.'s life, and it continued to be co-conscious even during sleep, delirium, etherization, and whenever the B. I state was in the ascendancy. But, following its emancipation during hypnosis, it became, also, a true alternating personality. Sally was superior to B. I in that she was not amnesic, and she was co-conscious with the latter. B. I however, was ignorant of all that concerned Sally.

A year after Sally appeared upon the scene, B. I had been caused, by chance association of ideas, to recall the primary pathogenic experience with the consequence that still another personality developed. This one, B. IV remembered her former life up until the dissolution of personality—she knew nothing of B. I, nor of Sally, and they, in turn, were ignorant of her memories.

Let us examine, now, the differences in the

personalities. In addition to being subject to spontaneous somnambulism, B. I was extremely neurasthenic, aboulic, morbidly reticent, sensitive and emotional. Among other good qualities, she was modest, conscientious, truthful, refined, well educated, and a bibliophile. Having studied stenography and the French language after the disintegration of personality had occurred this knowledge, in common with other knowledge pertaining to the B. I state, was not shared with Sally and B. IV.

Like those of B. IV, the qualities of the Sally personality were complementary to B. I. Despising B. I on account of her popularity, superior attainments, and poor health, Sally was mischievous, childish, impolite, rebellious and fond of slang. In addition to her occurrence as an independent personality, and as a co-conscious state with B. I, Sally was partially co-conscious with B. IV in that she was aware of the actions and the words, but not of the thoughts of B. IV. By means of obsessions she could control the actions, and even the perceptions, of B. I and B. IV. Subjectively, her health was excellent, though she was totally anæsthetic and without the senses of hunger, thirst, fatigue, and of time.

The personality of B. IV was superior either to Sally or to B. I. Though neurasthenic, her health was fair. She was ambitious, selfish, affable, and had no compunction about lying

whenever necessary. The only knowledge she had of B. I was obtained: 1, from isolated memory flashes; 2, by means of crystal vision; 3, through the agency of self-induced states of abstraction she could evoke visual and auditory hallucinations concerning B. I. She could not revive any of the memories of the Sally state.

Until the normal personality was obtained, in 1902, by suggesting to the hypnotic personality that it should "wake" from hypnosis without becoming disassociated either into B. I or into B. IV, all of the personalities continually alternated. Often the alternations occurred many times in the course of a day. At other times one personality might remain in the ascendancy for weeks at a time. After the normal Miss B. had been obtained all of the personalities alternated infrequently until, in 1905, the synthesis became permanent. It is interesting to note that early in the case Prince believed that if the hypnotic personality could be wakened without losing its identity the normal Miss B. would be secured. On attempting to do so, however, he had produced what resembled a state of dementia. The explanation afterwards came from the mischievous Sally, who, not wishing to sacrifice her independence, had been able, as a co-conscious personality, to bring about this dementia-like state.

The normal Miss B. represented union of the

B. I and B. IV personalities; Sally, the co-conscious personality, being necessarily included in the synthesis. In this case the production of a normal personality by means of hypnosis illustrates how the supposed abnormal hypnotic states were really the normal personalities of Marcelline and of other reported cases.

The following notes include some of the unique and interesting features of the Beauchamp case: The personalities Sally and B. IV did their best to prevent synthesis because each desired to maintain an independent existence. In fact, Sally disrespectfully upbraided Dr. Prince on one occasion solely because the success of his efforts to cure Miss B. would necessitate the conclusion of her own independent existence. In their attempts exclusively to reign over the body of Miss B. both Sally and B. IV carried on a bitter and spirited warfare in which, at times, they seemed to forget that when the body of Miss B. became the instrument of their hostilities each of the personalities also would suffer. To illustrate the extremes to which the struggle was carried, once Sally took four calomel pills and then resigned the body of Miss B. to B. IV. Another time she smoked a number of cigarettes in order to make B. IV ill. On still another occasion she had partaken of wine, and then, probably by accident, instead of changing to B. IV, the inoffensive B. I, who was unaccustomed to

wine, arrived on the scene to find herself somewhat intoxicated. Indeed, B. I became so harassed by the protracted contest that once she tried to commit suicide with illuminating gas, but Sally came to the rescue by turning off the gas and opening the windows.

The differences in the character of the personalities was most decided. Thus B. I could not take a single glass of wine without feeling uncomfortable, while B. IV had taken, without any such effects, as many as three or four glasses of champagne, followed by three or four cocktails and several glasses of liqueur. The odor of cigarettes was offensive to B. I and she had moral objections to smoking, but B. IV was very fond of cigarettes, of which she smoked a large number without feeling any ill effects. In fact, the tastes and the religious and other moral characteristics of B. IV were almost the opposite of those of B. I.

In instances like the Hanna case, in which the personality presumably had been entirely normal until some violent shock effected immediate dissociation with the production of a secondary state that was infantile in type, it seems that but two states exist for the reason that the secondary one is largely the product of new experiences and thus is not formed at the expense of the normal one. When a normal person develops obvious manifestations of

hysteria dissociation of his personality already has occurred and, in reality, there exist two secondary personalities; one being apparent and the other latent. The only reason why the latent one does not commonly appear as an alternating personality is because it is too fragmentary to maintain an independent existence. Clinically it is possible in the ordinary case of hysteria to demonstrate the existence of such incomplete personalities. In the cases of multiple personality of gradual onset we can assume, therefore, that there are always at least three personalities: the normal one, the gradually developed hysteric personality, and its complement. The prevention of alternation of the personalities of such cases does not constitute a cure: the secondary personalities must be fused before the normal one can be obtained. In the Beauchamp case, for instance, if either the B. I or B. IV personalities could have been prolonged indefinitely without alternation the result would not have been a cure for the reason that neither of these personalities represented the normal Miss B.

All of us have probably experienced tendencies to do things which were inconsistent with conduct conformable with the obligations imposed by occupation, finances, home life, social status, etc. Being incompatible with our external relations, such thoughts were suppressed. Simply being submerged, these ideas

continue to exert a modifying influence upon the better side of the ego, thus producing what might be called an average personality. In fact, we are all both better and worse than we appear to be to others, and our personalities, both as viewed by others and by ourselves, are merely masks which serve to screen the possibilities for good or evil that exist within us. Under favorable circumstances one who has been a criminal may live as an average individual, while if we should transfer the exceptional person to an environment where he is exposed to various stresses, we might bring into evidence traits which neither he nor his friends ever suspected. When dissociation occurs it is but natural that one personality should be lively and not too scrupulous while the other exhibits puritanical tendencies. Study of most of the reported cases of multiple personality shows this difference of moral characteristics.

Amnesia. Organic failure of memory is characterized by loss of the recently acquired memories, followed by progressive obliteration of the older and more stable ones. Ordinarily the mechanism of amnesia is divided into defects of registration, of conservation, and of reproduction. To speak of an amnesia resulting from imperfect registration, however, is not logical, for what has not been registered cannot

be forgotten—one cannot lose something which he never possessed.

It is well known that functional amnesia is never due to absence of conservation—to actual loss of memory—but that it is merely consequent upon the patient's inability consciously to reproduce the "forgotten" memories. Through the agency of certain well-known means proof of this fundamental proposition is obtainable without difficulty, and it is possible to demonstrate that what has been forgotten has only been dissociated from consciousness, and, therefore, has not been lost. Instead, then, of being a loss of memory the amnesia of hysteria is merely the result of elision from consciousness of certain systems of memories which subconsciously are conserved, or are part of a parasitic personality made up by synthesis of other dissociated memories and mental states. But, all kinds of functional amnesia are not explainable in this manner. The memories of events which occurred during any of the many kinds of seizures or somnambulistic conditions—deviations from the usual state of consciousness —are bound up with the memory complexes of that state, so that ordinarily they are incapable of conscious reproduction because they had never been components of the usual state of consciousness of the patient. During recurrences of like somnambulistic conditions these

dissociated memories become part of the state of the patient's consciousness at the time because they pertain to that state and not to the usual one. It is the same with what is called hypnotic somnambulism. During this artificial state the patient is capable of remembering the events of all previous states of like nature, yet, when aroused from hypnosis, all of these memories become dissociated.

Quite commonly hysterics complain of their poor memories and state that they cannot even remember what they have been told a minute before or what they have had for breakfast. Tell a hysteric to do something and usually she will not carry out the instructions correctly unless they are repeated. Ask her what you have told her, and she will answer that she doesn't know, or that she has forgotten. All of this, however, is not evidence of amnesia. The patient did not pay any attention to what she was eating, and you could plainly see that she was thinking about something else while you were talking to her. A man whose attention has been concentrated upon his work, and who has been thinking deeply, not only is unable to tell what hour was struck the minute before, but he may be consciously unaware even that the hour has been sounded. Neither can we call this ordinary incident amnesia, for there was absence of conscious perception of the

striking of the clock, and of the same nature is much of the so-called amnesia of hysteria.

The pseudo-amnesia of inattention might serve as the foundation from which by auto-suggestion, or expectant attention, different kinds of functional amnesia might be evolved. The symptomatic loss of memory occasioned by trauma, and by an alcoholic debauch, or other toxic state, also might attract the patient's attention to the possibility of this symptom. Finally, amnesia is autogenous when it occurs as one of the phenomena of some alteration of consciousness.

When physicians specifically interrogate hysteric patients about general deterioration of memory, or about definitely localized loss of memory, they reveal by their direct questions that these manifestations are to be expected. Consequently, sooner or later the patients very accommodatingly begin to exhibit amnesias originating from unconscious autosuggestion, and which cannot be regarded as differing in any manner from those which are deliberately produced by suggestion, either during, or in the absence of, hypnosis. Except the localized amnesias incidental to the attacks of hysteria—convulsive, somnambulistic, etc.—one rarely encounters independent amnesia in hysterics unless they have been subjected to suggestive inquiries which tend to bring about the condition which is sought.

An interesting feature which renders psychoanalysis and treatment more difficult is that the amnesias of attacks are inclined to be retrograde inasmuch as the primary and individual causes are forgotten. So also the patient usually is not consciously aware of the initial exciting cause of her disease. Thus, Janet's patient Marie, whose case has already been mentioned, had completely forgotten about the successful and disastrous suppression of her first menstrual period, and Sallie S. did not remember that her attacks followed references to her dead child. The explanation depends upon reaction of defense.

As the exciting cause of hysteria and of its manifestations frequently is some experience which, being decidedly unpleasant to the patient, she endeavored to forget, its memory complex became elided from consciousness with that facility with which dissociation occurs in hysteria. Furthermore, any idea which by association causes, or tends to cause, reproduction of the painful memories, itself is disposed to become a component of the submerged complex, which continually increases in magnitude with corresponding increase in liability to automatisms. "We ask," writes Ernest Jones, (Jour. of Abnormal Psych., vol. 4, p. 224,) "why the patient wished to forget the memories in question, and we find it was because they are associated with other more pain-

ful thoughts he did not wish to recall. We then go on to ask why these other thoughts were too painful to recall, and we get a precisely similar answer, namely because they are associated with yet deeper thoughts which he was still more desirous not to recall. We continue the investigation in the same way, constantly asking 'Why?' and constantly penetrating deeper and deeper into the patient's mind, and reading further and further back into his earliest memories. The pathogenic chain of associations is in this way traced to its original starting point."

An instructive case of psychasthenia exhibited in an unmistakable manner the incompatibility of dissociated memories with consciousness. Though possessing a nervous temperament the patient had never really been ill or subject to unequivocal nervous manifestations until she was confined to bed four months as the result of an attack of "nervous prostration" which occurred four years before coming under my observation. Following the illness she became obsessed with indefinite fear which compelled her, no matter how much she resisted, continually to look behind her. This phobia attacked her impartially at any time, and in any place. When interrogated she stated that she believed the apprehension to be based upon unreasoning fear of being struck from the rear, but she was positive in her as-

sertions of ignorance of its cause. Frequently she experienced visual hallucinations of a sea of blood.

Attempts to induce hypnosis resulted only in a hypnoidal state, during which the patient insisted that she was not at all influenced, even though unable to open her eyes. During her second visit a hypnoidal state again was induced, and efforts were made to discover the causes of her different manifestations. On this occasion it required five minutes of persuasion and suggestion before she could be prevailed upon to talk. Afterwards she confessed that her reluctance was due to a desire to show me that she was not hypnotized, and that she did not have to do as I said. With the patient in this imperfect hypnotic state the following information was obtained:

The attack of "nervous prostration" was precipitated by a quarrel during which her mother threatened to kill her. (The patient herself was a mild-mannered and most inoffensive woman.) She believed her mother was insane but was reluctant to express this opinion because it was contrary to that of a physician. Following her illness the visual hallucination of blood appeared, at first only after disputes with her mother, but the tendency for their recurrence became so developed and so expanded that soon they occurred after minor quarrels with anyone. The irresistible impul-

sion to look behind her appeared about four months after the quarrel, and was due, she said, to fear of being struck on the head. This obsession originally disturbed her only when she was at home, and it was a manifestation of fear that her mother would carry out her threat. Later, the tendency of the psychoneuroses pathologically to exaggerate what primarily were normal reactions caused this justifiable fear to become so expanded and so incongruous that it occurred anywhere, and without unusual provocation. Being of a painful nature the memory complex of the cause of the original normal reaction was suppressed from consciousness so that ultimately the patient became unaware of the origin of the phobia and of other manifestations which resulted from the quarrel.

After her usual state of consciousness was restored she asserted, as before, that she had not been hypnotized, and that she did not wish to deceive me by allowing me to think otherwise. Although she could recall much of what had been said during the hypnoidal state, and notwithstanding that she believed that she remembered the entire conversation, it became apparent, however, that *she was unaware of the whole of what she had said in connection with the genesis of all of her many symptoms.* Incidentally, her suicidal tendencies, phobias, and other obsessions disappeared completely

after their origin was explained to her, and after she had received four treatments with suggestion and psychic re-education.

Anterograde, or continuous, amnesia is the result of dissociation of memories almost as soon as they are formed and to a great degree probably depends upon inattention. The most celebrated example of this defect, in association with retrograde amnesia, is the case of Madame D., which was studied by Charcot, Souques and Janet. Having been told falsely that her husband was being brought home dead Madame D. had an attack of hysteric convulsions and delirium that continued for three days. Following the crisis not only was she unable to remember all that had occurred during the two preceding months, but for nine months she continued to forget whatever occurred the minute before.

Amnesias are localized when whole periods are blotted out, and they occur in this manner in almost all patients who are subject to the attacks of hysteria. This form of defective reproduction is most obtrusive in connection with the alternations of fugues and of multiple personality because the forgotten periods are longer than those of other states of disturbance of consciousness, and because these alternations do not incapacitate the patient from maintaining his external relations. Naturally it is important that one should remember what

new acquaintances have been formed, what engagements have been made, or where money has been safely placed away during the preceding days, or weeks, or months.

When the patient is unable to remember certain systems of knowledge the amnesia is systematized. Not only is the following case, reported by Breuer and Freud, a beautiful example of systematized amnestic aphasia, but it illustrates well the manner in which the development of symptoms may be deferred. One night, while somewhat confused and exhausted from nursing her father, Fraülein Anna O. experienced a hallucination which frightened her. At first she was unable to recall any words; then she remembered an English prayer. Subsequently, on developing grave hysteria whose symptoms were based mainly on the incidents of her father's fatal illness, she lost entirely, for a period of a year and a half, the use and comprehension of the German language while retaining her command of English. (Selected Papers on Hysteria and Other Psychoneuroses, trans. by A. A. Brill, 1909, p. 2.)

As already mentioned, the proof that the amnesias of hysteria are not dependent upon irretrievable loss of memories—faulty conservation—rests with the successful application of measures having as their end the reproduction of what has been forgotten. First, how-

ever, let us consider several of the ways in which spontaneously the patient gives evidence that the lost memories are really retained, and that the loss consists only in the patient's inability *consciously* to recall them. Investigation of the dreams of hysterics ordinarily shows that they are composed of the very memories which have been dissociated. For instance, in the Hanna case of dual personality vivid dreams occurred which, upon investigation, were found to contain elements of what had happened prior to dissociation. Such dreams included the names of persons, of objects, and of places which in his secondary state were meaningless to him.

In the course of the various attacks of hysteria quite as common is the display of knowledge of incidents which could not be recalled during the usual state of consciousness. Not only by their actions but also by their verbal utterances do these patients show recollection of what consciously cannot be remembered. Moreover, both the hallucinations which are experienced during less obvious alterations of consciousness, and the memory flashes which occur so frequently in cases of multiple personality, indubitably establish the preservation of memories which may have been deemed irrecoverable.

As the loss of memory is always more apparent than real, and as the trouble depends

solely upon defective reproduction, the physician must assume that the patient knows the facts which are desired, and to be successful he must not permit the patient to gain the idea that any doubt is entertained relative to the outcome of the investigation, and professions of ignorance never should be accepted. Since recurrence of seizures is effected by association of ideas which produce an upward flow into consciousness of dissociated systems with their morbid psychomotor expression, efforts to reproduce pathogenic complexes may be attended with the production of the attacks with which they are associated. This, however, is unusual and is easily prevented by suggestion, or the attack cut short by the same means. Much valuable information can be acquired through the induction of a single crisis, but it is decidedly unwise to encourage the pathologic disposition by unnecessary reproduction of seizures.

Inasmuch as functional lapses of memory are due to the objectionable nature of what has been forgotten, in his efforts to bring about reproduction the physician has to contend with the forces of the patient which strive to prevent the submerged memories from becoming conscious. The more nearly the patient's state of consciousness approaches that which is usual the greater the amount of unconscious inhibition exerted towards the prevention of

reproduction. When through the agency of hypnotic procedures we effect an artificial dissociation of consciousness inhibition of the submerged memories to a great extent is lost, and, therefore, the patient is able to relate the experiences which she cannot remember while in her normal state. In the psychoanalysis of those whom we may term good hypnotic subjects the hypnotic method is by far the least difficult in its application and the most prolific of the information which is sought.

Not every hysteric can be hypnotized so deeply as to become somnambulic. The best means of obtaining profound hypnosis consists in explaining beforehand what is about to be done and what condition is about to be secured. Proceeding, then, to hypnosigenesis, the physician attempts by means of further suggestions to induce somnambulism. But, if the desired state is not obtained—as will occur in from 10-30% of cases—the physician who has predicted, and who is suggesting the appearance of, conditions that do not materialize, thereby not only subjects himself to embarrassment, but he loses, to a certain extent, the patient's confidence. Consequently, under these circumstances reproduction of the submerged memories is usually difficult, if not impossible.

In order to avoid these difficulties Freud (Selected Papers on Hysteria, Brill trans.) adopted the following technique: Having the

patient lie down with the eyes closed, he requires her to concentrate her attention on what is about to be done. In this manner he obtains as profound a state of hypnosis as possible without, however, compromising himself by making false predictions and unsuccessful suggestions. While the patient relates her history gaps become apparent; she avoids certain periods, or leaves out causal events. When urged to remember the important memory complexes which these gaps represent she often protests that she cannot. Accordingly, an artifice is adopted which depends upon reinforced suggestion. Placing his hand upon the patient's forehead, Freud affirms that under the pressure of his hand the desired information will come into her mind, or that she will see some picture before her. Soon he found that all thoughts secured in this manner were relevant, and that a negative response never should be accepted, for when the procedure at first is unsuccessful the failure does not indicate that the right thought did not come into the patient's mind, but that, being of a distressing nature, it was repudiated as irrelevant, or too painful to entertain, just as originally the complex was submerged.

By means of the hypnoidal state Sidis, Coriat, White, Donley, Parker, and others have been very successful in the psychoanalysis of functional neuroses. The hypnoidal state of

Sidis consists in an unstable state of abstraction that intervenes between the waking state, on one hand, and either hypnosis or sleep on the other. As the amount of dissociation which accompanies the production of this state is neither profound nor constant, the submerged memories which arise are not complete, nor are they consecutive. Mainly on this account the results obtained with this method of reproduction of forgotten memories in my experience have not been as satisfactory as those secured with hypnosis. As described by Sidis, the mode of induction of the hypnoidal state is as follows:

"The patient is asked to close his eyes and keep as quiet as possible, without, however, making any special effort to put himself in such a state. He is then asked to attend to some stimulus, such as reading or singing, or to the monotonous beats of a metronome. When the reading is over, the patient with his eyes shut is asked to repeat it and tell what comes into his mind during the reading, or during the repetition, or immediately after. This should be carried out in a very quiet place, and the room, if possible, should be darkened so as not to disturb the patient and thus bring him out of the state in which he has been put. As modifications of the same method,—the patient or subject is asked to fixate his attention on some object, while at

the same time listening to the beats of a metronome, the patient's eyes are then closed, he is to keep very quiet, while the metronome or some other monotonous stimulus is continued. After some time, when the patient's respiration and pulse are found somewhat lowered, he is asked to concentrate his attention on a subject closely relating to the symptoms of the malady or to the submerged subconscious state. In other words, the patient is in a hypnoidal state favorable for the emergence of subconscious experiences."

"The patient again may be asked to be very quiet, to move, or to change position as little as possible, and is required to look steadily into a glass of water on a white background with a light shining through the contents of the glass; a mechanism producing monotonous sounds is set going, and after a time, when the patient is observed to have become unusually quiet, he is asked to tell what he thinks in regard to his symptoms. In other cases it is sufficient to put the patient in a relaxed condition, have his eyes shut and tell him to think hard of the particular dissociated states."

"Now in working with the method of hypnoidization I have often observed in using it that the patient at first tries to concentrate his attention and seems to fall into slight hypnosis, but pretty soon he is fully awake. In closely watching this condition I found that at first

the patient attempted to fixate his attention, then lost control over it. His attention being relaxed he fell into a sleep-state, out of which he emerged again, owing to the partial presence of the idea of the necessity of concentration of the attention, as well as to the partial watchfulness present. It is this alternate and incomplete relaxation and concentration of the attention that keeps the patient on the borderland of wakefulness, hypnosis and sleep. In some cases the hypnoidal state passed into hypnosis. Thus in one of my cases, V. F., at first I obtained only hypnoidal states, but after some time the hypnotic state gained ground and the subject passed into typical hypnosis and finally into a somnambulistic state. In other cases I have observed that preliminary to the passing into the hypnotic state proper a short interval is present which may be regarded as a hypnoidal condition. In many other cases the patient is not in the hypnoidal condition, but still there are phemomena present which remind one strongly of the hypnotic state." (Jour. of Abnormal Psychology, vol. 3, p. 15.)

With a limited number of patients dissociated memory complexes can be reproduced by means of crystal vision and automatic writing. When one suggests to a hysteric who is a good visualizer that while she looks into a crystal, or some other object, she will see taking place the particular event of which one may hap-

pen to be desirous of obtaining information, it is probable that the suggested visual hallucinations will occur. Of the successful application of crystal vision in the Beauchamp case one instance is most interesting because it demonstrates the conservation, and the possibility of reproduction, in this case at least, of memories of events which happened during febrile delirium:

"Miss B. looked again into the globe; she saw a room with a bed in it. There was a figure in the bed; the figure threw off the bedclothes and got up. Miss B. exclaimed, 'Why, it is I!' (Appeared rather frightened at what she saw, but went on to describe it, largely in answer to my promptings, such as, 'Go on,' 'What do you see?' etc.). She saw herself walking to and fro, up and down the room. Then she climbed on to the window sill which is the deep embrasure of a mansard roof. Then she climbed outside the window and from the sill looked down into the street. It was night—the street lamps were lighted, there was also the gaslight in the room. As she looked down, she felt dizzy. Here Miss B. turned away frightened, saying she felt dizzy as if she were standing there. She soon continued. She saw her vision-self throw into the street below an inkstand, which she had just seen herself pick up before climbing on to the window sill. Miss B. was again obliged to stop looking because

of dizziness. After a time she returned to the globe. She saw herself go back into the room and walk up and down; the door opened, and she jumped into bed and lay quiet. Miss L. (a friend) entered, went out, and returned several times; brought a poultice which she put on Miss B.'s chest; Miss B. herself remaining quiet. Then Miss L. went out and Miss B. got up and took the poultice, rolled it up into a little bunch and hid it in a corner, putting a towel over it. Here the experiment ended."*

"Miss B. stated, on being questioned, that she could not remember any incident like the vision, excepting that she recognized the room as the first one she occupied when she came to Boston four or five years ago. It was in the top story of a house on ——— street; she was ill there, and Miss L. took care of her. But she did not remember ever having climbed on to the window, or having thrown an inkstand, or any of the incidents of the vision. She could throw no light on the affair."

"Deep hypnosis: B. III appeared. With great vivacity and amusement, B. III explained the whole scene. 'She' had pneumonia and was delirious; and 'She' imagined 'She' was on the seashore and was walking up and down on the sand. This was why 'She' walked

*"Miss L., a physician, has confirmed her own part in this scene and the general facts of the illness as she knew them. Another physician had diagnosed pneumonia."

up and down the room, and 'She' stuck her toes in the carpet thinking it was sand. There were rocks there, and the window sill was one of them, and when 'She' climbed out upon the window sill 'She' thought 'She' was climbing upon a rock, and 'She' took up a stone, as 'She' thought, and threw it into the sea. This was the inkstand that 'She' threw into the street. Then when 'She' took the poultice and hid it in the corner, 'She' thought 'She' had buried it in the sand. Ink had been found in her shoes, but 'She' had not poured ink into her shoes, but her hand shook, and 'She' had spilled it into her shoes. Miss L., seeing the inkstains, had inferred that Miss B. had poured the ink into the shoes, and had told Miss B. so. B. III was highly amused at all the mistakes of Miss B.'s delirium.'' (The Dissociation of a Personality, 1906).

The method of association reaction time experiments is a valuable psychoanalytic means whose elaboration we owe mainly to Jung, and whose interpretations are based largely upon the theories of Freud. The clinical application of the method consists in timing the intervals between stimulus test words, which are called out by the physician, and the responses of the patient with the associated words which first arise in her mind. The normal reaction time varies somewhat in different individuals, but the average is about one or two seconds. The

physician makes up a list of about one hundred test words and then obtains the patient's reaction time to each. On analyzing the results it is found that the reaction time of some of the tests is much greater than the patient's average—the reaction has been inhibited. Careful study of these "complex indicators" is productive of a certain amount of information concerning either submerged complexes which have been "touched" by the test words, or conscious complexes whose existence the patient does not desire to reveal. If necessary a second list can be analyzed of significant words which the results of the first experiment suggest to the physician.

Whenever a test word "touches" a hidden complex, or one that is associated with a strong feeling tone, the reaction time is much lengthened, or the reaction is incomprehensible, or the patient does not react at all, and, when questioned, asserts that she has forgotten the test word. This last is particularly interesting in that it illustrates the tendency for words or ideas which have become associated with a submerged complex themselves to become dissociated. When the same list of words is gone over a second time the patient usually fails to react with the same words to those stimulus words whose reactions were inhibited the first time. Often significant reactions are obtained without retardation of the reaction time providing that

the complex which has been "touched" is not submerged nor particularly unpleasant. On the other hand, retardation always occurs when the patient not wishing to reveal some conscious idea deliberately substitutes a word for the one which arises in her mind.

CHAPTER X

Hysteric Temperament—Suggestibility —Delusions—Insanity—Theories

THE mental state of hysteric persons usually deviates markedly from what might be considered normal standards, and it is upon this continuous pathologic foundation that many of the paroxysmal "accidents" develop. Strictly speaking it is not logical to speak of certain selected groups of symptoms as the mental state of hysteria, for the study of the disease as a whole is merely a study of morbid mental states and their physical expression. Moreover, there is no group of distinctive mental "stigmata" whose detection enables one positively to pronounce the presence of what is termed hysteria, or by reason of whose absence hysteria can be eliminated.

By no means do all hysterics present a common type of temperament. In the same manner that the character of all other symptoms depends almost entirely upon the personal equation, so also does the temperament of a hysteric. The mental characteristics of a phlegmatic German who develops manifestations of hysteria certainly will not be like those of an emotional Frenchman. There are, nevertheless, certain kinds of mental peculiarities

which are encountered so frequently among cases of hysteria as to deserve being designated the hysteric temperament. Though possessing some significance when present, the absence of what is called the hysteric temperament is not to be considered as evidence of any value in the elimination of hysteria.

Judgment and cerebral inhibition being deficient, and sensibility to many kinds of impressions being increased, the hysteric is inclined to exhibit imperfect self-control in that her reactions to mental stresses are exaggerated or perverted. Consequently, emotional outbursts may occur that, according to usual standards, are excessive in character and duration and which normally would not be justified by their exciting causes. Briefly, the reactions of the individual to his environment are excessive and perverted.

Emotional instability and morbid sensitiveness naturally result in rapid variations in moods: at one moment laughing, the hysteric may be crying the next. The same factors are apparent in the "hysterical" attacks of alternate crying and laughing. Not all emotional outbursts, however, are significant of hysteria just as no other one symptom is indicative of the disease, and, on the other hand, the emotional displays occurring in undoubted hysteria should not be considered evidences of reprehensible wilfulness. Neither are they always

the result of immediate faulty parental supervision; the blame, if any, should rest with the decreased power of inhibition that is symptomatic of the disease.

In hysteria, the faculty of mental representation is greatly increased and gives rise, among other symptoms, to varying moods and to romancing. The patient passes much of her time in weaving stories around little incidents that arise, and usually she places herself in the star role. If the faculty of visualization is well developed these day dreams are visualized. One patient asserted that when meditating she heard her own thoughts, and that she could hear answering voices if she desired. While romancing she visualized the scenes of her dramas and held silent conversations with the actors. The faculty of mental representation being so highly developed in those who are good auditives and visualizers, it would be interesting to know the frequency with which they become victims of hysteria as compared with those who do not possess these powers. Indulgence in romancing is decidedly harmful. Frequently, not only delusions and other psychic symptoms, but also physical projections such as anæsthesia and paralysis may be traced directly to some day dream which had supplied the material that subsequently became fixed by unconscious autosuggestion.

Being extremely sensitive, hysterics brood

over supposed wrongs, neglect, or derision, and often some of their complaints seem to be based upon no other cause than morbid desire to provoke attention and sympathy. In an adult this represents reversion to similar tendencies of children. After being rebuked, or spanked, often the child tells his parents that they don't care for him, and that they would act differently if he were sick. Going off by himself, he vividly pictures himself seriously ill with his friends and relatives grouped around his bed carefully tending to his wants, grieving about his condition, and expressing remorse for their former neglect and ill treatment. The only difference between these day dreams of the child and those of the hysteric depends upon the fact that in the latter the idea of illness is sufficient to induce actual representation.

Morbid desire for sympathy and to be the center of attention is a prominent trait of many hysteric patients, so that, excepting as subjects of clinical demonstration, nothing pleases them more than to be carefully examined and studied by physicians. So great may become this desire that the hysteric may hesitate at nothing to gratify the propensity. Thus feigned hæmatemesis, anorexia, fever, and self inflicted mutilations by no means are rare. To reiterate, such malingering should not be regarded other than as a symptom, and as such

it has nothing in common with simulation by a non-hysteric.

The effects of desire for sympathy and attention exhibited by one of Wilson's cases is interesting. (Modern French Conceptions of Hysteria, Brain, 1910, p. 315.) A girl of 15, wishing "to be coddled" like her sister, who had a deformed foot resulting from injury, at first unconsciously copied the deformity and later drove a large tack into her foot with consequent infection and other complications. At 19 she cut her hand in order to make the school mistress love her more. The following year the mother was ill in bed and this aroused in the patient the desire to be ill, too, and to receive sympathy. Thinking "it would be nice to have spinal disease" she rubbed nitric acid up and down her back. A year later hysteric paraplegia appeared associated with analgesia extending up to the waist and also involving the whole of one side. At this time she was detected breaking off needles in her anæsthetic side.

The self infliction of pain in McArthur's case was due to a different motive; one which is not rare, but which is seldom carried to such an extent. (Jour. of Nervous and Mental Disease, 1911, p. 425.) When 17 the patient scratched the end of her little finger with a pin. Recurring abscesses followed, and, after three years, the finger was amputated. A year later an-

other finger became similarly involved, and this one, in its turn, was amputated at the end of a year. After this the other fingers, the hand, and segments of the forearm, and arm were sacrificed progressively for recurrent abscesses. Finally, at thirty-two, even the scapula and the outer half of the clavicle were excised. At this time Briquet attacks and sensory deficits were present. It developed that pain in the wound produced an orgasm, and for this reason the patient purposely irritated the wound and prevented it from healing. Psychoanalysis of this case would be interesting in determining how the association of pain and orgasm came about originally.

Egocentricity, whether this be active, or simply a passive form that permits the patient to accept sacrifices, frequently results from desire to command sympathy and attention. No matter how altruistic the individual may have been moderate or excessive disregard of the feelings and rights of others is very apt to develop after the onset of hysteria. The hysteric malingerer does not seriously concern herself about the additional expense that her simulation may impose upon the already drained finances of her family; neither does she consider the long hours of deprivation of sleep that she may occasion those who are caring for her during some more or less grave illness which she is simulating. In the words of Sidis "innate cussedness" in itself may make a psychic trouble worth studying.

Often the patient is an intelligent woman whose home shows abundant evidence of refinement and artistic tastes. Conversing with her we note that she is quiet, very charming, and that she possesses a widely varied, and somewhat more than superficial, fund of knowledge. Really it is a pleasure to chat with her. When the conversation turns to herself, and particularly to her bodily health, she continues to smile pleasantly while describing in an intelligent manner her various symptoms, for each of which she has a logical explanation. Touching upon her history she volunteers the information that she has never been hysterical or emotional; in fact just the reverse. Protesting all the while about any inconvenience which she may occasion yet she continues to detain us with much unnecessary and irrelevant detail. Constantly we see indications that while apparently she strives continually to be most considerate of others still those with whom she is associated are subjected to much inconvenience and unnecessary, but willing, self sacrifice. In spite of what ordinarily would be considered distressing and serious manifestations she does not seem to be concerned over these. Indeed, they afford her an opportunity for conversation which is just as impersonal as if she were discussing the health of a friend. Such a patient, one whose description by no means is overdrawn for it is that of an actual case, is typical of patients encountered in the better classes of society.

In the sense that this term is usually employed morbid introspection does not belong to the symptomatology of hysteria. Rather as an evidence of the clinical syndrome known as psychasthenia is the non-insane obsessive introspection. Neither are fear and worry to be met with in the infrequently encountered cases of uncomplicated hysteria. The typical hysteric is absolutely unconcerned about her condition, no matter how serious this may appear to be, and the only reason why she may attend to her symptoms is because of the sympathy and attention which they may provoke in others. Instead of worrying over their condition some patients seem almost to derive pleasure from their various manifestations. These are the confirmed hysterics who delight in having a new set of symptoms or in presenting aggravations of former ones each time the physician calls. *Their* malady is superior to any physician.

It is difficult to hold the attention of a hysteric. Instead of attending to the necessities of the moment attention is diverted into other channels, or is concentrated upon some revery. This characteristic helps to explain some of the inconsistencies revealed during examination. When testing hearing with a watch the ticking is not consciously perceived because the patient is really not attending to the perceptions. Frequently, normal persons, who have not been attending to what has been said, ask that a

remark be repeated, yet, in the same breath, they show that they have heard by responding before we have had a chance to comply with the request. Unless attention is deeply concentrated upon some one object normally it is possible consciously to perceive a number of different kinds of sensory impressions while attending to a variety of acts. Thus the teacher lectures to his class while demonstrating manually, "keeping an eye" on the delinquencies of some one or more members, and perceiving a number of other extraneous sensory impressions.

According to Janet the field of consciousness of the hysteric is so contracted that she is unable to attend to different impressions and acts at the same time. Although Janet's views of retraction of the field of consciousness cannot be accepted in their entirety, yet many of the manifestations of hysteria closely resemble peculiarities of normal absent-mindedness. Does not the absent-minded individual ignore all perceptions unrelated to the absorbing interest of the moment? According to Ribot, voluntary or artificial attention is a product of education—of civilization—and it is grafted upon spontaneous or natural attention. (The Psychology of Attention, Open Court Pub. Co., 1890.) Hence we may look upon the hysteric's deficiency of voluntary attention as one of the many types of reversion, exhibited in hysteria,

towards the mental traits of the child, or, phylogenetically, towards those of the savage.

In addition to instability of attention the hysteric exhibits a tendency towards interference with, or unconscious prevention of, more or less automatic acts when her attention is directed to the manner in which they are performed. This is but an exaggeration of the normal, for most of our acquired reflex or automatic actions are best executed unconsciously. The normal interference of conscious attention is often to be observed in the gait of the student as he ascends the steps to the stage in order to receive his diploma, and is often apparent in the actions of the actor new to the stage. This fact is so well known that even the layman remarks that the individual is self-conscious. It is shown also, as Jastrow has remarked, by the difficulty which many experience in the attempt to swallow a pill. Although those conditions which are called attention neuroses—stammering, insomnia, astasia-abasia, attention tremors, etc.—may occur in hysteria the majority are symptomatic of psychasthenia.

Volition is not impaired in hysteria; it is perverted. The patient is unable consciously to will a paralyzed arm to move because subconsciously a greater effort of volition is exercised in order to maintain the paralysis. Let us regard the apparent diminution of will

power as being due to the antagonistic effects of contrary and subconscious acts of volition. Instead of being decreased it would seem, in fact, that there occurs actual increase of will power. Surely it requires an unusual amount of perverse application of the will in order that deliberate mutilations can be self inflicted for no other reason than to elicit sympathy and attention. Consider, too, the intensity of purpose necessary to starve oneself to death as so frequently occurred consciously in cases of hysteric simulation of anorexia, and subconsciously in the essential, non-simulated anorexias of hysteria.

Abnormal Suggestibility. The only constant, and therefore characteristic, symptom or stigma of hysteria, the one which, in reality, is at the foundation of the great majority of other manifestations, is abnormal increase in susceptibility to suggestion, whether this be to the suggestions of others or of self. Just as it is believed that the ultimate analysis of thought and of all other forms of mental activity reveals the dependency of these processes upon sensory impressions—immediate or remote—so that which is designated autosuggestion must be consequent upon an external stimulus. Clinically the source of the autosuggestions of hysterics often is found to be the unintentional suggestions of others. Thus the autosuggestion responsible for psychic contagion is really a manifestation of heterosuggestion.

Expectant attention is the equivalent of autosuggestion. If one attends to any function while expecting certain variations to occur, is not autosuggestion implied? By autosuggestion we do not mean that in the absence of some good reason a patient deliberately thinks: "My arm will become paralyzed." Rather than such a gross misinterpretation of the term as applied to the genesis of symptoms of hysteria, let us say that there is subconscious belief, *engendered by more or less logical reasoning,* that the arm may become paralyzed. In a hysteric patient the idea of a symptom only too readily is evoked, and the process by which actual representation occurs through the agency of these ideas is designated autosuggestion. To those who have not experimented with hypnosis—and practical knowledge of the phenomena capable of being brought about by suggestion is almost essential in order to grasp the mechanism of production of symptoms of hysteria—free use of the term autosuggestion is apt to convey the impression that the process is mysterious, and but little understood, and that the term is too comprehensive; in fact, that it is but a convenient cloak for real ignorance of the mechanism which is being described.

For the purpose of illustrating the quite reasonable manner in which an autosuggestion is originated, there is no better example than that afforded by the use of a prism in a case of

suggested visual hallucination. When a prism is placed before one eye of a subject in whom one has succeeded in producing by suggestion a visual hallucination, not only are the images of actual objects doubled, but also the hallucinatory image is reduplicated. Such an experiment reveals the delicacy of autosuggestion. To call the process by which this reduplication occurs autosuggestion is just as gross a means of explanation as to apply the same term to similar processes occurring constantly in hysteria. The fault lies in the impossibility to designate briefly a process which is so complex and so delicate as that of autosuggestion, but to one who is conversant with hypnotic suggestion the term autosuggestion is quite intelligible.

It has been contended that the "suggestionists" attempt to explain everything by suggestion without being able to explain suggestion itself. Neither can physicists tell us just what electricity is, yet they manage to understand it sufficiently to enable others to make use of its advantages. As we do possess knowledge of the effects of intentional suggestion in hypnosis and hysteria, there does not seem to be any reasonable objection to descriptions of the pathogenic effects of accidental suggestion in those who are known to be abnormally susceptible to this agent, even though we cannot tell just what it is or how it acts.

To understand better the pathogenic possibilities of suggestion, let us digress in order briefly to study normal suggestibility; for all people are susceptible to suggestion of some form or other, even though habitually they may seem to exhibit opposition to external influences. The great numbers who developed manifestations of hysteria among those who attended the early religious revivals, and among Indians during ghost dances, is indicative of the suggestibility of mankind. Among many other similar instances which could be adduced in reference to the heightened suggestibility characteristic of a mob is one related by De Goncourt: During the Franco-Prussian war, thousands of men were convinced that they had seen posted on a pillar of the Paris Bourse an announcement of French victories—some even had read the bulletin—when, in reality, the incident was one of a mutually suggested visual hallucination.

Normally, a suggestion tends irresistibly to arouse ideation in the same manner that all thought is dependent upon present or former sensory impressions. Just as emotions always find expression in some form of physical activity, so man tends to act in accordance with his ideas. It follows, then, that suggestions are disposed to become realized. To control this tendency, cerebral inhibition is brought into play—the suggested idea is criti-

cally examined, and if not compatible with the interests of the individual, the suggestion is not acted upon. Confidence, on the other hand, leads to inhibition of criticism. Even though contrary to our own convictions, we often accept and carry out the suggestions of another who possesses our confidence. Thus, we are not constantly on the defensive when obtaining information from those in whom we have confidence; while, on the contrary, we refuse to believe all the statements of one whom we distrust, especially if critical examination of his assertions results in doubt concerning their probability. Confidence, then, increases suggestibility, and distrust inhibits this normal characteristic of the human mind.

Children are highly suggestible because they do not possess sufficient knowledge to enable them to examine critically suggested ideas before accepting them as facts. They have confidence in most everyone because they have not yet learned that much of our vaunted knowledge, and much of what is taught them as facts, later must be subjected to critical revision or entirely discarded. In fact, anyone who is ignorant of a subject necessarily must accept the statements of one who knows more than he about the matter. The student would only be confused were his teacher to qualify his statements and to discourse learnedly on theories and exceptions. Hence he is given

a skeleton of dogmatic facts. After he has acquired rudimentary knowledge of the subject, the student discovers that he must discard some of these fundaments, and so elaborate the revised whole that finally he possesses a conception which is largely the product of his own efforts.

Because of their confidence, and being unaccustomed to subject to criticism what they are told, children may accept the most improbable statements. So readily does the imaginative child confuse his own day dreams with reality that it is not surprising that another person unintentionally may cause him to be the victim of hallucinations and delusions. On more than one occasion a child has testified about some crime when his testimony was solely the result of a suggestive form of questioning, or of a "third degree" examination. It is not unknown, also, for false confessions of crimes to be obtained in the same manner—even with adults—and with most disastrous consequences.

The combative, self-reliant man who takes pride in asserting that he is not open to the influence of others is actually less suggestible than usual. Still, even he can be successfully acted upon with suggestion, providing that he is unaware of the fact. What might be called a general law of suggestibility provides that normally, and often abnormally, the more

veiled and indirect the suggestion the greater the chance of realization, while during hypnosis, and in some cases of hysteria, usually the more direct and forcible the suggestion the more apt is it to be accepted. In other words, normally a suggestion which is recognized as such always tends to arouse opposition. If one should remark to a hysteric: "Your arm is paralyzed and without feeling," it is probable that she would deny the assertion at once. But subject the same patient to the usual suggestive form of physical examination which reveals to her that the physician expects to find loss of sensibility as part of her disease, and commonly anæsthesia will be discovered at the time, or afterwards.

Spontaneously in psychasthenia, and often artificially as a result of hypnotic suggestion, there may be strenuous opposition to a suggested idea, yet the conscious rebellion is overcome by subconscious acceptance. It is characteristic of a psychasthenic to be fighting continually against obsessions. While walking along the street a psychasthenic sees a fruit stand and the thought flashes into his mind of the shocking consequences which would ensue were he caught stealing an orange. Though the fear of stealing an orange and the impulsion to do so are recognized as foolish, yet, as much as he strives, he cannot dismiss these obsessions from his mind. The resistance of the

psychasthenic to his obsessions is due to knowledge concerning the source and nature of his symptoms. On the other hand, the hysteric is unaware of the reason for her symptoms because the whole mechanism is subconscious. The difference between the two is well illustrated by the difference in the manner of fulfillment of a post-hypnotic suggestion which the patient recognizes as such, and of one whose source is veiled by amnesia.

What is suggestion? The definition of such a comprehensive word is as impossible as the definition of hysteria. The whole question of suggestion resolves itself into the necessity for each to have his own conception just as all who have dealt with the subconscious have their own useful but widely varying conceptions of the subject. Bernheim comprehensively defines suggestion as the act by which an idea is awakened and accepted. Sidis writes: "By suggestion is meant the intrusion into the mind of an idea; met with more or less opposition by the person; accepted uncritically at last; and realized unreflectively, almost automatically." (Psychology of Suggestion, 1889, p. 15.) Merely as a working hypothesis let us say that normal suggestibility consists in the critical acceptance of suggested ideas providing that they promote, or are compatible with, the welfare of the individual. A state of abnormal suggestibility is in evidence when by reason of an ex-

cessive amount of confidence, or of diminution in the power critically to examine and to reject what is suggested, a person accepts and acts upon ideas which do not conserve his own interests.

A good example of the genesis of a symptom in the suggestion of another is shown by a patient who, in addition to other symptoms, for several years had been afraid to go to sleep. The origin of the fear was unknown to her, yet it was found, during hypnosis, that following the sudden death of her father a "clairvoyant" friend in whom she had implicit faith had told her to take good care of herself as her turn was coming soon. The shock of her father's death being a good foundation, this suggestion became fixed, and before a month had passed she developed "nervous prostration" and was confined to bed for a few weeks. Her fear of going to sleep was based upon fear that she would not wake in the morning.

Prince's Beauchamp and B. C. A. cases contain many examples of the mechanism of autosuggestion in the production of various manifestations. In the section dealing with astasia-abasia one instance already has been mentioned. The following one is described by the co-conscious personality B. of the B. C. A. case: "C. once had a visual hallucination of Dr. Prince, because I was thinking of him. She

was thinking of entirely different matters, but I was thinking that if it were not for Dr. Prince I might, perhaps, stay all the time, and was wondering why it was that I did not go away somewhere; why it was that I felt bound to keep C.'s appointments with him, etc. As I was thinking all this C. suddenly saw Dr. Prince standing before her. He was so real that she spoke his name, saying, 'Why, Dr. Prince!' '' (Jour. of Abnormal Psychol., vol. 3, p. 311).

Hallucinations, Delusions, Sub-conscious Fabrication. By reason of the increased power of mental representation, hallucinations, delusions and subconscious fabrication are exceedingly common in hysteria. Even during the minor emotional crises hallucinations not only occur, but their character determines largely the nature of the attack. Thus Sallie S. hallucinates her dead child during her seizures, and Parker's patient experiences a fetid taste before each convulsive attack.

Through the agency of hypnotic suggestion it is not difficult to induce hallucinations either during the hypnotic state, or after resumption of the usual state of consciousness. Ordinarily those in whom hypnotic hallucinations can best be secured are the good visualizers or auditives. Otherwise the subject states that the music runs through his head, but he doesn't actually hear it, or that the picture only rises in his

mind. The successfully induced hallucination corresponds to those of hysteria while the less successful ones resemble the mental imagery of the good visualizer who can project the mental image of a person and make the projected image act as desired, but who recognizes that the image is only the product of his own mind.

What has been called a negative hallucination is the absence of conscious perception of what subconsciously is perceived. Hysteric amaurosis and other varieties of disturbances due to lack of conscious perception of sensory impressions, particularly when the deficit is systematized, furnish examples of this condition.

When the memory of the hallucinations or delusions of a hysteric crisis, or of some other state of alteration of consciousness, is carried over to the usual state and the patient relates the subjective experiences as actual occurrences the condition is known as subconscious fabrication. A common source of subconscious fabrication is the day dream. So vivid may be the mental imagery of the day dream that its content may become fixed and elaborated in the same manner that the habitual liar finally believes his own lies. Whatever the origin, the patient really believes in his fabrications and he relates them without having any intention to deceive. It is unfortunate, however, that generally the fabrications are looked upon as intentional lies, and it is on this account that the hysteric is

supposed to be deceitful and thoroughly unreliable.

On two occasions one young hysteric dreamed that two men had entered her room and had cut off her hair. The third morning her window was found open and her hair, cut off about six inches from the scalp, was discovered on the floor. She told the family and myself that she did not know how her hair had been cut off, but that she thought someone must have entered her room during the night. During the hypnotic state she admitted, without any hesitation, having cut off her hair because she did not like it so long. Formerly the hair had been cut every summer, but this year, in spite of her remonstrances, it had not been done. Dreams being largely based upon antecedent events and thoughts, it is not surprising that after unsatisfactory discussions over having her hair cut the little girl should have experienced dreams in which her desire was fulfilled. The dreams probably acted as suggestions and as reinforcements to her desire with the result that she got up at night and cut off her hair. Being in a somnambulistic condition at the time she did not remember after waking in the morning what had occurred. Consequently, she drew upon her memories of the former dreams in order to explain the event.

Suppose that while romancing a patient appropriates and applies to herself some incident

which happened to a friend. Later she may relate the exaggerated occurrence as having happened to herself. Gordon has reported a case in which the patient acted in accordance with the belief that her relatives were trying to kill her. These persecutory delusions were the outcome of a novel which she had read. On another occasion she recounted with a wealth of detail the events of her marriage and honeymoon abroad. This fabrication, too, was the result of personal application of material derived from another novel. (Amer. Jour. of the Med. Sciences, 1906, 1,830.)

In a case of dissociation of the personality recorded by Angell, the patient narrated the most remarkable and elaborate history of periods for which, in reality, he was amnesic. Afterwards it was found that his account was due to falsification of memory; the patient really believing at the time what he related. This patient filled in the gaps in his memory with elaborate detail just as a subject who has carried out a post-hypnotic suggestion gives a specious reason for the act which he affirms was performed of his "own free will." When hysteric patients relate improbable tales, or ones which are known to be untrue, one must not be mislead into believing that the stories represent deliberate lying whose object is to stimulate interest and wonder.

Hysteric Insanity. There is still less of a dividing line between ordinary hysteria and

what is termed hysteric insanity than there is between sanity and insanity.

Whether one decides that a case is one of hysteria or of hysteric insanity depends entirely upon the intensity and fixity of the more obvious psychic manifestations, and upon the degree to which they incapacitate the patient from entering into external relations.

As a matter of fact the majority of hysteric patients present many of the symptoms upon which a diagnosis of insanity is ordinarily based. Thus transitory hallucinations, delusions, and states of delirium and of confusion are exceedingly common. Leaving out of consideration the possibility of insanity plus manifestations of hysteria, if one chooses to recognize such a combination, then there really is no such condition as hysteric insanity just as hysteric paralysis is not actual paralysis; either of these manifestations being merely a psychic duplication of more serious conditions. All the clinical types of insanity, however, may be counterfeited so veritably that often a mistake in diagnosis may be made and remain uncorrected until the patient has been under observation for a considerable period—perhaps in a hospital for the insane.

On one occasion I signed the commitment papers of a young girl who presented what were considered to be indubitable manifestations of alienation, only to have her discharged over two months later with the report that dur-

ing the whole of her stay in the institution she had been entirely free from any symptoms of insanity. Until her admission to the hospital this patient, nevertheless, had exhibited many fixed delusions of a paranoid type. Frequently she had threatened to kill her father, to set fire to the house, and to commit suicide. On two occasions she had attempted suicide with gas. Moreover there was good reason to believe that she had entertained homosexual relations with her sister. In consequence of fear that the patient would commit some serious act of violence after her release from the hospital, her parents refused to allow her to remain at home so she was admitted to a charitable institution.

It must not be thought that patients with hysteric insanity do not become violent, for such is not the case. In a comprehensive paper containing reports of a large number of cases of hysteric insanity Woodman (Jour. of Nerv. and Ment. Dis., Jan., Feb., and Mar., 1908.) remarks: "On the other hand the symptoms are of wide variety and may be of extreme violence. It is a mistake to think that because a patient is hysterical that all the mental symptoms are shallow and ephemeral and scarcely are real at all. A hysteric often acts under profound emotion and may do any rash or violent act that profound emotion suggests, as for example. Case No. 5, in the present series, took with suicidal intent all her sleeping pow-

ders at once, and recovered because the total dose was not lethal rather than because her suicidal act was consciously inadequate. More or less determined and entirely real efforts at suicide are decidedly common."

As illustrated by the Bachman case even murder may be committed during hysteric insanity. This case being so unusual and so instructive a somewhat detailed account seems warranted. Following a period of careful study of the Bible, at the instigation of a friend who had recently been converted, Bachman developed a state of religious ecstasy with visions. Through psychic contagion his wife, sister, and brother-in-law became similarly affected. Among the phenomena experienced by this small group of worshippers who made their own interpretations of the New Testament, were the "second coming of Christ," and the expulsion of devils from their bodies by the Spirit of God.

During the height of religious frenzy accompanying the efforts of casting out of devils Bachman killed his five-year-old niece. This act was the consequence, he stated, of impulsions, which he felt came from God, to kill the child, thus driving out the devils and sending her to heaven instead of to hell.

Three weeks after the tragedy he related the facts of the murder without hesitancy or emotional display except for slight exaltation

when discussing his religious views. The only regret he had was that the others had abandoned the new creed. Having been declared insane by a commission in lunacy he was admitted to the State Hospital for the Insane at Norristown. Not until eight months after the deed did he show any change in his views, and then with distinct emotion he talked of the crime stating that he must have been influenced by a higher power.

"In a conversation held nearly a year after the ones above reported," writes W. W. Richardson, the author of the paper of which the above account is an abstract, (The Case of Robert Bachman, Jour. of Nervous and Mental Diseases, 1910, p. 689.) "he stated that he and his wife had lived in a very narrow circle all their lives and that he had never realized how ignorant they were of life and the relations of things until he came to Norristown. He said he had known nothing of insanity nor what insane people were like. Since coming here he had had much opportunity to learn what insanity meant and to compare himself with others whom he knew to be insane. While he still felt that his act was not wrong for the reason that his motives were pure and that he had no evil thoughts against the child, still he tacitly admitted the probability that he was not mentally sound when he killed the child. At this conversation it was noted also that he was

under a considerable emotional strain and that he felt the subject a painful one, thus showing a striking contrast to his early readiness of speech about the matter."

"Since his admission to the institution he has been a model patient in every respect, working faithfully and efficiently wherever placed and showing much enjoyment in the day's work, especially when out-of-doors or about machinery, for which he has an aptitude. He is extremely tactful and courteous in all his relations with both patients and officials. He never discusses his troubles with anyone unless questioned and then only with physicians."

The writer believes that there are many reasons why Bachman should not be considered a religious paranoiac. He considers the diagnosis difficult but concludes that "in view of the epidemic nature of the whole manifestation, the absence of delusions at present and the tendency toward recovery of a normal mental tone, a diagnosis of hysterical insanity of the epidemic type seems the only one justifiable." Having carefully searched the literature Richardson was able to find one case ("Case of Chas. F. Freeman, of Pocasset, Mass.," by C. F. Folsom, M. D., Amer. Jour. of Insanity, vol. 40, p. 353.) which was identical in many respects with his own, and a second one, reported by Dr. Henry M. Hurd, (Annual Report of the Eastern Michigan Hospital for Insane for the

year 1884) which showed points of resemblance.

Though the prognosis may usually be considered to be good it must be remembered that hysteric insanity at times is only a forerunner of real insanity, and that it is not uncommon to discover what appear to be manifestations of hysteria in patients whose actual insanity is in a stage of evolution.

Theories. Before taking up some of the views of Janet and of Freud let us examine in abstract some interesting biologic conceptions held by Jelliffe. (N. Y. Med. Jour., May 16, 1908.) For Jelliffe hysteria in an adult consists in a collection of primitive modes of reaction. Ontogenetically, hysteric individuals are matured children; phylogenetically, they are instructed savages. The mental characteristics of hysteria comprise instability—particularly emotional instability—suggestibility, negativism, and egocentricity. Desire to be the centre of attention causes the savage to strut about in feathers and paint, while in hysteria the same egocentricity, here a manifestation of atavism, is the motive for romantic accusations, self inflicted mutilations, and for theatrical attempts at suicide. Practically all the physical signs result from abnormal suggestibility. Lack of logical judgment is the chief characteristic of the normal mentality of the child, and as hysteria represents reversion towards the infantile type this characteristic leads to a sys-

tem of autosuggestion which may terminate in profound disturbances of personality. "The importance of moral causes in the development of hysterical states cannot be overestimated. From this point of view we may consider hysteria as a series of abnormal reactions of the individual to the exigencies of life. These abnormal modes of reaction are often the consequence of the fetters, or the obstacles which the moral and social order impose upon the expression of the natural tendencies of man and show themselves the more strongly the closer the man approaches the child viewpoint." The association of hysteria with organic disease strictly accords with the "hypothesis that the superior individual is one who by intelligence and by training has developed past his hysterical infancy, or youth, but let intercurrent disease reduce his resistance, or sink the level of his nervous tension, as Janet would express it, and a natural reversion to primitive traits is to be expected." Beside symptomatic hysteria and the evolutive type representing only an accident in the mental evolution of the individual, or of the species, there is a third group of cases composed of degenerative hysterias—of hysteria developed upon a distinct neuropathic heredity.

Man strives to place all phenomena upon a physical basis, and among these has been included hysteria. Applying to hysteria the

hypothesis of Rabl-Rückhard it has been proposed to explain the condition by assuming that the underlying pathologic mechanism is one of dendritic retraction. Beside the fact that this theory is but feebly supported by facts, and that it has been rejected in many authoritative quarters, its application to hysteria does not explain in a satisfactory manner the pathology of the disease, no matter how attractive at first it may seem. Where does the retraction take place in case of psychic anæsthesia? What cells are isolated? Sensory impressions from the anæsthetic region not only are perceived, as shown elsewhere, but apperception occurs, and an intelligently directed motor response may take place. Therefore, the cortical cells which receive the impulses are not isolated and retraction of dendrites would have to involve over half of the cells of the brain, thus producing a true double personality. It would be difficult to explain how retraction of dendrites could produce a case of double consciousness in which the morbid personality possessed the memories of both states while the first one is limited to its own. Finally, retraction of dendrites not only must be capable of being induced by suggestion, more or less independent convictions, etc., but of being dispelled by the same factors.

The most important of the early advances in the study of hysteria was the recognition by

Jules Janet, in 1888, of the disintegration of personality which occurs in the disease. About the same time Pierre Janet began to develop the psychopathology of hysteria upon a basis of subconscious fixed ideas, or of dissociated memory complexes. According to his conception of the disease the most characteristic manifestation is somnambulism; a condition dependent upon cleavage from the usual state of consciousness of a system, or of systems, of memories. When somnambulistic crises result from the activity of a single dissociated system of ideas the condition is termed monoideic somnambulism. Polyideic somnambulism and fugues result from dissociation of a number of systems, and multiple personality, the ultimate of dissociation, represents massive disintegration of personality. The many other attacks of hysteria are merely abortive or imperfect types of somnambulism.

Janet believes that the deficiencies of conscious perception are capable of being explained by assuming that as a result of retraction of the field of consciousness there occurs a kind of absent-mindedness; being unable to attend to many kinds of sensory impressions the patient gets into the habit of not consciously attending to the ones which are least important to her. When the habit becomes fixed anæsthesia, amaurosis, etc., result. He defines the disease as "a form of mental depression characterized by the retraction of the field of personal consciousness

and a tendency to the dissociation and emancipation of the systems of ideas and functions that constitute personality."

According to Babinski the stigmata are always the effect of suggestion; usually of medical origin. He defines hysteria as a psychic state which renders the patient susceptible to suggestion. It is manifested principally by primary disorders and accessorily by secondary disturbances. What characterizes the first is the possibility of reproducing them by suggestion with rigorous exactitude in certain subjects and of making them disappear under the exclusive influence of persuasion. What characterizes the secondary disturbances is that they are strictly subordinated to the primary disorders.

In 1893 a new epoch in the study of hysteria was initiated by the contribution of Breuer and Freud, and at present Freud's highly elaborated conception of submerged complexes and the results of their activity is the one which is rapidly finding acceptance in neurologic circles. The theories both of Freud and of Janet have been drawn upon extensively in the composition of the body of this work; in this section it is intended merely to recapitulate some of the more important and less complicated of Freud's investigations.

Before taking up some of his original theories let us first quote from the Peterson and Brill translation two sentences which indicate Freud's

agreement with the results of researches commenced by the French school: " . . . the splitting of consciousness, so striking in the familiar classical cases of double consciousness exists rudimentarily in every hysteria, and that the tendency to this dissociation, and with it the tendency towards the appearance of abnormal states of consciousness which we comprehend as 'hypnoid states,' is the chief phenomenon of this neurosis." "A persistent hysterical symptom therefore corresponds to a projection of this second state into a bodily innervation otherwise controlled by the normal consciousness. A hysterical attack gives evidence of a higher organization of this second state, and if of recent origin it signifies a moment in which this hypnoid consciousness gained control of the whole existence, and hence we have an acute hysteria, but if it is a recurrent attack containing a memory we simply have a repetition of the same."

Normally the effects of an emotion which has not been adequately externalized may be worked off by means of subsequent verbal expression—giving vent to one's feelings. Or these deleterious effects may be neutralized by association with antagonistic ideas. For example, the painful memories of an accident are rendered inocuous by association of ideas with its fortunate termination. When, as a reaction of defense, an individual strives to for-

get the painful memories of some experience and thus fails adequately to express the emotional feeling, the memory complex of the occurrence may become submerged, or dissociated. The motives for suppression of various ideas and mental states may be consequent upon moral training, social environment, or upon the painful nature of the ideas themselves. All ideas which tend to bring the dissociated complex into the stream of consciousness themselves are dissociated as secondary reactions of defense, with the result that the original complex becomes surrounded by a continually increasing number of associated constellations until the whole, by a process of conversion, may react upon the patient by producing any of the various manifestations of hysteria. These manifestations are merely symbolic representations of what has been repressed, or they may be fixed or recurring symptoms derived from phenomena which were accidentally associated with the emotional experience which served as the exciting cause.

When tracing back, by means of psychoanalysis, the different levels of psychic traumata from which symptoms were derived, Freud found that invariably they led back to sexual experiences of early childhood. Inasmuch as perpetuation of the species is dependent upon the sexual instinct, this force is most obtrusive and far reaching; its influence being

perceptible in much of our activity, even though commonly this is not fully appreciated. Having such a vast number of ramifications, it is but natural that this instinct should exert a tremendous influence in the genesis of psychoneuroses.

Sexual modesty having been acquired by precept, and by education, normal sexual longings are consciously repressed as immoral and reprehensible, with the consequence that ultimately the dissociated ideas may become converted into physical symptoms, or into obsessions, just as the force of the instinct may be converted into increased professional activity and thus expressed. Morbid anxiety and other obsessions are deviations due to repression of sexual desire from its natural mode of expression: they are transformed reproaches for pleasurably accomplished sexual activity of childhood. Hysteria is the outcome of a conflict between libido and sexual repression; the symptoms being a compromise between two antagonistic psychic systems. Apparent lack of sexual impulses is due to successful repression of the sexual instinct, and is accompanied by commensurate substitution of some other kind of expression. The psychic traumata from which symptoms of hysteria are derived, are experiences concerning the sexual life of the child, even though the exciting cause be some emotion of a non-sexual nature.

When consciousness is at its normal minimum—during sleep—inhibition is so reduced that suppressed complexes assert themselves. Dreams, therefore, are elaborated and fanciful expressions of desires which have been consciously repressed as incompatible with the ego. Being such, investigation and intelligent interpretation of the content of dreams leads to valuable information concerning submerged complexes.

In support of his views regarding subconscious pathogenic memory complexes, Freud has made careful studies of the normal activity of complexes which do not rise to the level of consciousness, and he has shown that much of our psychic activity is dependent upon motives of which we are ignorant. We act from motives of which consciously we are unaware, and in our ignorance we ascribe our actions to motives which, in reality, are fictitious. When we are unable to recall a familiar name, and in its place others arise, only to be rejected, the whole is not a matter of chance. Analysis of such incidents shows that the name cannot be recalled because of its association with some disagreeable ideas which have been repressed. For example, Freud was unable to recognize a name which he came across in one of his account books. The subconscious motive—discovered later—consisted in the fact that he had overlooked a pelvic sarcoma while treating the patient for symptoms of hysteria.

An individual turns a deaf ear to any arguments concerning his religious convictions because, as he thinks, it would be sacrilegious to enter into any such discussions. He is not aware of any other and more fundamental reason for his disinclination to argue the point, yet the real incentive is his own suppressed tendency to question the rationality of his superficial beliefs. That a person can perform an act as a consequence of the activity of a submerged complex and yet believe that he is acting in accordance with some other and entirely different motive is not as improbable as at first it may seem. The controlling influence of subconscious complexes is best illustrated by the manner in which an individual accounts for an act which was really imposed upon him by post-hypnotic suggestion. The following incident related by Jastrow is a good example of unconscious falsification of motives:

"In a garden, on a hot summer day, when all energies are relaxed, a mother requests her daughter to get a certain book from the study-table. The request seemingly goes unheeded, for the daughter continues to loll in the hammock. Yet presently she goes to the house and returns with the book and the explanation, 'Mother, I happened to see your book, and thought you might want it.' Her surprise at the laughter that greeted her remark sufficiently attested her unawareness of the source of the

impulse upon which she had acted." (The Subconscious, 1906, p. 134.)

For further information concerning Freud's work the following English translations, reviews, and other papers upon which I have been largely dependent may be recommended:

Freud: Selected Papers on Hysteria, trans. by A. A. Brill, 1909.
Freud: Three Contributions to the Sexual Theory, trans. by A. A. Brill, 1910.
Brill: Freud's Conception of the Psychoneuroses, Med. Record, Dec. 25, 1909.
Brill: The Anxiety Neuroses, Jour. of Abnormal Psychology, vol. 5, p. 57.
Putnam: Recent Experiences in the Study and Treatment of Hysteria at the Massachusetts General Hospital; with Remarks on Freud's Method of Treatment by "Psycho-Analysis." Jour. of Abnormal Psychology, vol. 1, p. 26.
Putnam: Personal Experience with Freud's Psychoanalytic Method, Jour. of Nervous and Mental Disease, 1910, p. 657.
Putnam: Personal Impressions of Sigmund Freud and His Work, with Special Reference to His Recent Lectures at Clark University, Jour. of Abnormal Psychology, vol. 4, pp. 293 and 372.
Coriat: A Contribution to the Psychopathology of Hysteria, Jour. of Abnormal Psychology, vol. 6, p. 33.
Jones: Psycho-Analysis in Psychotherapy, Jour. of Abnormal Psychology, vol. 4, p. 140.
Jones: Rationalization in Every-day Life, Jour. of Abnormal Psychology, vol. 3, p. 161.
Jones: The Psycho-Analytic Method of Treatment, Jour. of Nerv. and Ment. Dis., 1910, p. 285.
Hart: Freud's Conception of Hysteria, Brain, p. 339, 1911.

In connection with Freud's theories the following papers also are of great interest:

Jung: Psychology of Dementia Praecox, Peterson and Brill trans., 1909.

Brill: Psychological Factors in Dementia Praecox, Jour. of Abnormal Psychology, vol. 3, p. 219.
Jones: Remarks on a Case of Complete Auto-Psychic Amnesia, Jour. of Abnormal Psychology, vol. 4, p. 218.
Onuf: Dreams and Their Interpretation as Diagnostic and Therapeutic Aids in Psychopathology, Jour. of Abnormal Psychology, vol. 4, p. 339.

CHAPTER XI

Diagnosis, Prognosis and Treatment

THE diagnosis of hysteria—a disease which is capable of mimicking closely practically all other diseases, and which occurs so frequently in association with organic maladies—often must be attended with great difficulties. Not only are the symptoms of hysteria innumerable, but constantly one encounters unique cases presenting symptoms which never before have been described, and which can be recognized as manifestations of this disease only by analysis of the psychic factors which enter into their production. Providing that an adequate examination has been made, the diagnosis of typical cases is easy; but such cases are uncommon.

In males, in children, and in the aged, the diagnosis may be encompassed with greater difficulties than usual. In children, and in males, the disease is prone to be monosymptomatic, and frequently these patients do not present much evidence of what is designated the hysteric temperament. In the aged symptoms of hysteria often mask those of organic disease, and besides, the fact that the patient is beyond middle life is apt to lessen the chances of ascribing to hysteria symptoms which are really due to this disease.

Often the diagnosis is made merely on the evidence afforded by emotional instability, and general "crankiness"; and this may be accomplished without first having eliminated the possibility of co-existence of some other, and perhaps more serious, disease whose treatment is of far greater importance. Quite commonly the general practitioner makes the mistake of considering as hysteric the more or less intentional emotional outbreaks—"hysterics"—of pampered children and wives; disturbances calculated to break down the resistance of those who oppose their vagaries. And, on the other hand, as a result of such a conception of the disease the manifestations of frank hysteria too often are regarded as those of organic disease. Ordinarily there is far greater chance of mistaking for organic disease the many kinds of paralysis, contractures, convulsions, etc., than of making errors in the recognition of manifestations of actual organic disease. Besides being essential, thorough examination not only will decrease the unwarranted frequency with which the diagnosis hysteria is abused, but it will enable one rigidly to exclude, and the necessity for this cannot be too greatly emphasized, or to recognize the coexistence of, organic disease.

As suggestion is at the foundation of most hysteric "accidents" the physician should constantly be on guard in order not to develop new symptoms by reason of a faulty technique of

examination, and, in the treatment of patients, not to prolong by an injudicious amount of attention the duration of symptoms which already are present. Naturally the existence of psychoneuroses does not prevent the occurrence of other diseases, so that the diagnosis hysteria is never complete unless these either have been recognized or excluded. Infrequently it may be impossible to decide definitely whether a case is one of hysteria or of organic disease, and, in these cases, it may be necessary to keep a patient under prolonged observation before a positive diagnosis can be made with any degree of accuracy.

Analysis of dispensary and private records shows that hysteria is about one-third as frequent as psychasthenia, and that the sexual incidence in hysteria is about M : F :: 1 : 3, while in psychasthenia the ratio is almost equal; males being slightly in excess. It should be added, however, that many cases which were classified as psychasthenia might be designated by others as cases of neurasthenia, hysteria, or hypochondriasis.

In attempting to separate into different functional diseases various abnormal manifestations of psychic origin, it should be remembered that we are merely classifying in an arbitrary manner, and purely for clinical purposes, different types of abnormal reactions which necessarily must vary to the same degree that even nor-

mal individuals vary. Being characterized by perverted reactions of the individual to his environment, any attempt symptomatically to classify the psychoneuroses must be arbitrary and unsatisfactory.

What are called hysteria, psychasthenia, neurasthenia, hypochondriasis, and multiple personality, are only clinical syndromes, and as such their differentiation is often difficult, if not impossible. Hence, cases which might be considered neurasthenia by one physician would be designated hysteria by another, and psychasthenia or hypochondriasis by a third.

The impossibility of arriving at a satisfactory symptomatic classification of psychoneurosis corresponds with the abandoned attempts symptomatically to classify insanity. Such attempts must fail for the same reason that it would be impossible to classify mankind according to the manner in which individuals react to various environmental stimuli. "It is the men of science who cut separate pieces out of a whole that nature has made continuous." (Janet).

The differential diagnosis of the psychoneuroses still further is complicated by the frequent occurrence of cases into whose composition enter symptoms of hysteria and of psychasthenia, or of hysteria and neurasthenia. As careful study resolves most, if not all, cases of neurasthenia into hysteria and psychasthenia the

present tendency is to abolish neurasthenia as a clinical entity. In fact, Prince considers the neurasthenic state to be one of the stigmata of hysteria. Many of the cases which formerly were classified under the name hypochondriasis —of which we hear but little in these days— are now regarded as types of psychasthenia. In view of the unsatisfactory nature of the usual symptomatic classifications, still further tendency towards unification has been evidenced by the proposal that we should abandon attempts to classify the functional neuroses, and that all of these cases be grouped under the term psychoneuroses. Such a careless mode of solving, or rather of escaping from, the problem would be just as much an instance of retrogression as would be relinquishment of attempts to classify alienation and merely to be satisfied with the term insanity.

The only value possessed by the diagnoses hysteria, psychasthenia, neurasthenia, and hypochondriasis, is the fact that these terms convey some idea of the character of the manifestations presented by a patient. Having the same end in view, however, one might proceed indefinitely to divide these conditions into gastric neuroses, cardiac neuroses, sexual neuroses, innumerable varieties of phobias, etc.

Enough has been said in describing the individual symptoms of hysteria to render unnecessary their detailed differentiation from those of organic disease. As combinations of symptoms

of hysteria may mimic closely other diseases it is advisable, however, briefly to consider several of these. Excluding epilepsy, probably the most difficult diagnostic problem consists in the differentiation of some cases of hysteria from multiple sclerosis. In both diseases symptoms often appear suddenly in an emotional young woman, and, after having persisted a varying length of time, disappear just as abruptly. In each disease there is no fixed order of appearance of symptoms; neither is there much limitation to symptomatic possibilities. In some cases of multiple sclerosis which appear to be uncomplicated by hysteria the patient may display emotional outbursts and evidences of what constitutes the classic hysteric temperament. These manifestations are supposed to be due to plaques of sclerosis in the optic thalamus. As multiple sclerosis is so generally complicated by hysteria the ability to make a positive diagnosis of hysteria never excludes the possibility of co-existence of multiple sclerosis, or, in fact, of any other organic disease. In doubtful cases typical organic kind of exaggeration of the tendon reflexes, presence of true ankle clonus, of the Babinski sign, and of atrophic changes in the optic discs, always signify the presence of multiple sclerosis, or of some other organic nervous disease.

Acute and chronic abdominal disease may be closely mimicked by hysteria, and even though

this functional neurosis is known to be present the difficulty of excluding appendicitis, gastric ulcer, etc., may be great. The fact that the patient is known to be a hysteric is very apt to lead to greater diagnostic uncertainty by reason of fear of being biased and thus ascribing to the hysteric element symptoms of some serious organic disease. A valuable differentiating sign consists in the fact that hysteric patients usually breathe more deeply when pressure is exerted over a painful abdominal region, while in organic abdominal disease the actual pain resulting from localized pressure prevents deep respiration and the patient either momentarily ceases to breathe, or the respirations become quite shallow.

When it is impossible to eliminate positively organic disease it is essential to treat the patient as though the condition were organic, and if the necessity for an operation appears to be absolute, then it is preferable to operate unnecessarily on several cases of hysteria rather than to allow one case of hysteria to die because actual appendicitis, for instance, arose as a neglected complication.

When hysteric patients simulate disease in order to command attention and sympathy curious diagnostic problems may arise. Among these may be mentioned those patients with hysteric vomiting who simulate gastric ulcer by means of vomiting blood which they have ob-

tained by causing epistaxis and then swallowing the blood.

Course and Prognosis. In my opinion hysteria is rarely cured. The manifestations of the disease can be removed easily in most cases, and the morbid temperament of the patient somewhat modified, but all the accidents continue to exist as potentialities which may become actual at any time, providing that sufficient provocation occurs. The "cure" of these cases resembles the "cure" of pulmonary tuberculosis in that symptoms of either disease may be caused to subside, and the underlying predisposition diminished, but we well know that both of these conditions have become merely latent.

Provided that the patient has not instituted legal proceedings, monosymptomatic hysteria resulting from injury is much more amenable to treatment than other forms of the disease in adults. If such patients come under intelligent treatment soon after the onset, the symptoms almost invariably can be removed without difficulty. If the symptoms have existed for a long time, then they may have become so fixed as to be more or less permanent in spite of the most prolonged and careful treatment. Ordinarily, the longer a symptom has existed the more resistant it is to treatment.

With the pure forms of hysteria occurring in children, the results of treatment are eminently

satisfactory, and the ultimate prognosis is much better than with adults. The reason for this is evident when one stops to consider that the minds of children are in the stage of evolution, and, being plastic, are easily influenced. The harmful results, too, of faulty education and environment can be corrected more readily before emotional instability has become habitual.

Without treatment symptoms may vanish during an emotional shock, or in the absence of any apparent cause. Sometimes, after having resisted all forms of treatment, they disappear spontaneously as the result of most curious and trivial incidents. Wilson mentions just such a case. (Brain, 1910, p. 313). A young woman gradually developed mutism that was completely resistant to treatment. Long after leaving the hospital she discovered that she had been right in an argument she had had with her aunt before the mutism had developed. In her elation she cried out: "I'm right," and then: "Oh, I've spoken, auntie!" Wilson remarks that from that moment her recovery was complete and lasting.

Some patients avail themselves of their disease in order to obtain their own ends, and under such circumstances the physician works at a disadvantage. The cases which are most resistant to treatment are those in which the disease appears after middle life, and those subjects of traumatic hysteria whose recovery

to a great degree is prevented by protracted legal proceedings whose "favorable" outcome is dependent upon the severity and hopelessness of their condition. Even though the latter sincerely desire to be cured of their manifestations the fact alone that a lawsuit is in progress, to say nothing of the suggestive effects of the prognostically unfavorable testimony to which they are exposed, is most conducive to the indefinite continuance of the disease. If paralysis can be induced by suggestion alone certainly it can be caused to become more or less permanent when the patient hears an expert testify that such may be the case.

The prognosis is bad, also, in those who develop hysteria upon a foundation of decided neuropathic heredity, and whose environment is unfavorable, as usually it is in these cases. Even though their symptoms may be readily removed, recurrence of old, or the development of new, manifestations sooner or later is almost inevitable.

In arriving at a prognosis the apparent severity of a symptom is not a criterion. Often the most severe symptoms are controlled much more readily than those which seem almost negligible. The removal of a convulsive tendency, for instance, is much less difficult than the cure of a long standing functional headache. If patients do not receive any treatment usually the manifestations gradually or

suddenly disappear to be replaced by others, or the patient may remain comparatively free from obvious symptoms for an indefinite time. Often, too, a symptom which has been produced by one emotional shock will disappear suddenly after a second one. It should be remembered that not infrequently major symptoms have persisted for many years in spite of treatment. More than one hysteric afflicted with a psychic paraplegia, for instance, has been confined to bed many years, or, in fact, until death occurred. As far as death is concerned the prognosis of hysteria is excellent. Almost the only symptom which is capable of causing death is hysteric anorexia; the patient dying from starvation. Such fatalities, formerly so frequent, would not be permitted to occur at present.

Prophylaxis. The prophylaxis of hysteria is little more than the application of correct methods of education—using this term in its most comprehensive sense. By a process of hardening, predisposed children should be educated psychically to react in a normal manner not only to the usual stresses of life, but to the more severe psychic insults to which all are exposed. Most essential is the development of proper realization of true relations with the outside world: to cause the individual to appreciate that she is only a unit in a vast system.

As the parents of nervous children are often

nervous themselves the influence of psychic contagion should be avoided, if possible, by changing the child's environment. If old enough she may be sent to a boarding school, and thus the beneficial effects of discipline and of constant association with many normal children are gained, and, furthermore, she passes through experiences which tend to promote self-reliance.

Sedentary habits should be discouraged, and a healthy out of door life instituted, especially in connection with the usual games of children, even if these are rough. The great difficulty with predisposed children and young adults is that they are usually carefully shielded from unpleasant experiences and their lives made too calm. By reason of such fostering care any trivial difficulties to which they are unaccustomed tend to arouse emotional reactions which are out of proportion to the exciting cause. Instead of being carefully shielded and kept "tied to the apron strings" of their mothers, who too often are hysteric themselves, children should be exposed, carefully at first, to the troubles of childhood and of maturity and thus accustomed to disappointments, to knocks, and to the necessity of recognizing the rights of others.

Instead of condoning emotional outbreaks the child should be taught to control her temper and to realize, too, that desires cannot always be indulged—that many must be relin-

quished. In fact one should strive constantly to engender emotional stability, and to discourage selfishness and desire for sympathy. In place of making much ado about trivial injuries and thus stimulating desire for sympathy, parents should be instructed to treat these with judicious neglect, and never to sympathize unduly with the child over what are negligible and inevitable minor difficulties of childhood.

The pernicious habit of relating ghost stories to children, and of enforcing obedience with threats about the "bogey man," cannot be condemned too strongly. Many adults whose minds otherwise are not obviously abnormal are obsessed with vague fear of darkness, or some other phobia of like nature, which can be traced back to just such foolish stories. There are few factors which are more detrimental than abnormal fear, and for this reason it is most essential that the child should be brought up in a manner which is as devoid as possible of elements leading to the development, and to the encouragement of fear. Rather a boisterous, noisy, and fearless child than a quiet one subdued by various threats and later to become obsessed with morbid fears.

The practice of reading trashy literature, and especially that type of sensational novel which is responsible for so much silly sentimentality, is responsible for the development of unhealthy emotionalism and of faulty concep-

tions which are bound to lead to unnecessary disappointments and to lost illusions. Those who indulge in this type of literature are the very ones who lead sedentary lives, and consequently, the mischievous effects of such reading is not so apt to be counteracted by actual experiences. It is these young girls who are fond of going off by themselves and having day dreams in which they figure in unusual and impossible episodes. As these day dreams are purely a type of dissociation in which imagination is allowed to run riot, the individual is encouraging the development of unhealthy subconscious states which are characteristic of the psychoneuroses, and in consequence of some emotional disturbance which is greater than usual such states may assume some form of activity independent of the consciousness of what is now a patient. The importance of romancing as one of the factors in the genesis of hysteria cannot be disregarded. One has only to question a number of female hysterics to discover that the majority were accustomed to the dissipation of day dreaming before the onset of actual hysteria.

As the shock occasioned by the first appearance of the menses in young girls who, with great injustice, have been kept in ignorance of this function, is often the exciting cause of hysteria it is most important that the phenomena of menstruation should be fully explained before

pubescence arrives. Youths, too, should be instructed concerning the harmless nature of nocturnal emissions and thus saved from the decidedly harmful effects of quack literature ascribing disastrous consequences to this normal effect of sexual continence. The majority of those males who become what are commonly designated sexual neurasthenics owe their distressing condition to inexcusable ignorance concerning nocturnal emissions and to morbid reproaches for former sexual offenses. Having proceeded so far in educating the young in sexual matters let us not stop here. Freud has shown the importance of the sexual instinct in the genesis of hysteria, and clinical experience teaches that many females develop the disease from occurrences which could not have happened had they possessed even a rudimentary knowledge of sexual matters.

Physicians are justified on these grounds alone in encouraging parents judiciously to instruct their children in the function of reproduction. By means of commencing with plant life and then proceeding to reproduction in animals this end may be accomplished gradually, and in a manner which should be productive of nothing but good results.

The prophylaxis of hysteria is simple in theory, but, unfortunately, the practical application of preventive measures is another matter. Usually the physician has little opportunity of

attempting to modify or to prevent the development of a predisposition to hysteria, and his greatest difficulty is in contending with the well meant but prejudicial interference of parents.

Treatment. He who is not satisfied with temporary amelioration of symptoms but who seeks to "cure" hysteria, or at least more or less permanently to remove manifestations of the disease and to modify the underlying psychopathic state, must have unlimited patience, a large amount of time at his disposal, and a considerable aptitude for detail. Even though manifestations are sometimes capable of being removed at once the majority of patients require many hours of the physician's time before really good results can be expected. To be successful the physician must do more than write prescriptions and give general advice: he must plan out just how the patient must pass every hour of her time, and then see that she carries out his instructions. Often he will be compelled to find some suitable occupation for a woman who is unaccustomed to work, and this, it is hardly necessary to add, is no small task. In view of the fact that to be beneficial the chosen employment must interest the patient, the problem of occupation is rendered still more difficult. As such close supervision of her mode of living necessarily renders the patient dependent upon the physician it is essential that, as her state improves, her self-reliance be developed, and

the physician must gradually curtail his attentions while eliminating himself from her life.

The treatment of actual hysteria naturally includes those measures which are of value in the prophylaxis of the disease. By reason of the psychic nature of the disease routine treatment in the majority of the cases must be attended with failure. Absolute individualization is indispensable, for measures which succeed with one patient will fail or even aggravate the symptoms of another. Thus one patient may recover under some therapeutic method whose mainstay is rest, while others, who would be aggravated by enforced inactivity, might derive benefit from some carefully selected and agreeable form of occupation. The physician, then, who treats the patient and not the disease is the one who will be most successful in his management of the psychoneuroses.

When examining a supposedly hysteric patient one should first eliminate organic disease, and then base the diagnosis upon the psychic factors of the case while carefully avoiding the production of any of the so-called stigmata. Going into unnecessary detail in questioning the patient about symptoms which might occur in hysteria, and too thorough and repeated study and clinical demonstration of symptoms which have originated in suggestion, are most detrimental. The more carefully one examines into

the state of the different kinds of sensibility of the patient, and the more frequently she is subjected to such examinations, the more "stigmata" and symptoms will be evident at subsequent visits, while the greater the amount of judicious inattention to what are known positively to be manifestations of hysteria, the more rapidly will these disappear.

The patient's conception of hysteria is entirely different from that of a physician. In her mind hysteria is not a disease; but just willful display of emotional outbursts of crying and laughing which occur in spoiled women who adopt this means to an end. Consequently, having completed the examination it is usually unnecessary and unwise to tell the patient that she has hysteria. One should evade the issue by calling the condition a gastric neurosis, a functional paralysis, etc., until at least the patient's confidence has been gained.

Unless the physician does not care to have the patient return by no means should he inform her, as so often is done, that her symptoms are only imaginary. Not only is this untrue, but to her a splitting headache, a psychic paralysis, an amblyopia, etc., are just as real as though these symptoms were the product of some organic disease. Certainly, to be told that such distressing complaints are only imaginary is most insulting to her reason, and she justly concludes at once that he who utters such an assertion neither un-

derstands her case nor his own business. Instead, then, of making such a mistake one should strive to arouse the impression that her symptoms are understood perfectly, and that while none of these is phenomenal, or incurable, all have received the same amount of consideration which one would bestow, for instance, upon a broken leg.

Naturally, organic disturbances should not be overlooked, and when present, attempts should be made to ameliorate or to correct them, without, however, resorting to unnecessary administration of drugs. Often the patient is informed, with an unnecessary amount of solicitude, of relatively harmless abnormal conditions of various parts of her body, and the state of different organs is discussed with an assumption of profound knowledge and pseudo-scientific thoroughness. The admission of facts which, because of their insignificance and in view of the abnormal suggestibility of the patient, should be concealed, or at least the inocuous nature of the abnormalities carefully explained, may greatly aggravate the condition by giving additional cause for worry, and by affording the patient suggestive data which may lead at first to anticipation, and then to the genesis of various new manifestations of morbid ideation. After having been told, for instance, of a well compensated and practically harmless mitral re-

gurgitation the patient may commence to group around this organic nucleus a number of psychogenetic symptoms until a "cardiac neurosis" is developed with all its attendant and distressing symptoms. In fact, the majority of cardiac and gastric neuroses can be traced directly to the injudicious remarks and unnecessary treatment by general practitioners who, being satisfied with a diagnosis, either have neglected to reassure the patient, or their efforts in this direction have been perfunctory and ineffective.

It should not be forgotten, too, that as secondary manifestations of abnormal psychic states patients frequently present symptoms of functional disturbance of the various organs, and that as the phychosis improves these disturbances spontaneously disappear. For instance, in consequence of depressing emotions the digestive fluids fail to be secreted in sufficient quantities, with the result that fermentation and then auto-intoxication appear. When having to deal with some of these physical expressions, or concomitants, of abnormal mental states judicious neglect often is desirable, and local treatment, besides being frequently ineffectual, has a decidedly pernicious mental effect.

It is essential that the physician should gain the patient's confidence; otherwise, all therapeutic resources will be of little or no avail.

The logical effect of confidence, reinforced by the knowledge imparted by the physician of the curability of the disease, is to induce the patient to anticipate recovery of health. Inasmuch as expectation of cure usually must precede amelioration or removal of symptoms, it is of the utmost importance for the physician to strive to secure this favorable mental state. To this end the patient should be assured that no matter how serious her symptoms may seem they are without organic foundation and they are devoid of the possibility of any physical sequellæ. Knowing the ease with which the manifestations of hysteria usually can be dissipated one can affirm honestly that under the treatment which is about to be instituted her symptoms will disappear.

After having gained the patient's confidence the physician might do well to explain the psychic origin of the symptoms and the mechanism of association of ideas in the production of recurrences of periodic phenomena. Caution must be observed in deciding when it is advisable to enter into such explanations. Unless one has sufficient authority to command respect, or unless the patient has perfect confidence in her physician, she may become indignant at the attempt to insinuate, as she might express it, that her grave symptoms are only imaginary.

When the symptom complex includes symp-

toms which comprise what is called a cardiac neurosis the patient should be assured, after careful examination, of the really harmless nature of her heart lesion, if she has one. She can be told that the majority of people has some minor heart murmur, and that although the term valvular heart disease popularly implies a dangerous malady, this interpretation is false. In reply to her protest that she gets out of breath if she runs up several flights of stairs one has only to explain that this is not at all unnatural, and that among the normal expressions of fear are palpitation, rapid action of the heart, and increased respiratory rate. Consequently, that when she becomes frightened about her heart, or at any time when she is alarmed, it is inevitable that she should experience some cardiac and respiratory symptoms; that it is only by attending to these manifestations and fearing grave consequences, by reason of ignorance of their meaning, that she aggravates what otherwise are normal conditions.

In explanation of a gastric neurosis the patient can be informed of the effects of mental states upon the secretion of digestive fluids as demonstrated experimentally by Pawlow. In the same manner she can be shown that, in view of the circumstances under which she labors, many of her symptoms represent normal reactions of the organism, and that as her compre-

hension of the physiology of her body progresses these circumstances will be so altered that the manifestations no longer can occur.

Having explained the symptoms and reassured the patient often it is wise, during subsequent visits, to treat with judicious neglect the various manifestations; otherwise, by keeping the patient's attention directed upon them they are apt to become more fixed. For the same reason patients should be told never to talk about their ill health, or other troubles, and always to discourage others from doing so. It is well to instruct her that when anyone inquires about the state of her health she is to reply that she never felt better, and then she must change the subject. In fact, one of the difficulties with which physicians have to contend is the decidedly mischievous, but well meant, commiseration of friends and relatives who are constantly reminding the patient of her manifestations. It is largely on this account that isolation from friends and relatives is such an important therapeutic factor.

Having secured the patient's confidence and active assistance, and having induced a state of expectant attention, the battle is already half won. Almost of equal importance, however, is the understanding with members of the family, if the patient is treated at home, that the physician's authority is to be absolute; that if the patient protests about her inability to continue

with some therapeutic method which she believes will aggravate her condition they will discourage promptly such ideas and refrain from interfering with the management of the case. The importance of such an understanding is great, for if the active assistance of the parents is not gained in this respect then the physician not only has to contend with the patient but also with the whole family.

When the patient is told that she is to take a daily walk, for instance, she complains to her parents, or husband, about the impossibility of even attempting to do what formerly she was utterly incapable of doing. They agree with her and promptly the physician is notified that it is out of the question for so-and-so to carry out these particular directions. Naturally, this not only has a bad suggestive effect upon the patient, but it materially increases the difficulty in enforcing instructions which must be carried out or the physician will lose what authority he has already gained. For the same reason no measure should be proposed unless the physician is reasonably certain that it can be successfully carried out, and then, having proposed it, it is necessary that it shall be successfully instituted. In case the patient remains at home it is often just as necessary to "treat" the family as it is the patient, and one must always pay much attention to the instruction of those with whom the patient associates

in order that they will not sympathize with her.

Before committing oneself to any form of special treatment it is best to ascertain what methods have already been employed. Ordinarily one would not care to adopt any therapeutic measures which have been unsuccessful in the hands of others, and to a certain extent one would do well intelligently to use those agents which the patient regards with favor, for the reason that these would be more apt to arouse expectation of propitious results.

When effectual, the so-called rest cure owes its success principally to isolation of the patient from his sympathetic friends and relatives, to careful supervision of nutrition, and, in fact, the whole daily life of the individual, and in a large measure to the great impression which the whole makes upon the patient, thus tending to arouse a hopeful state of mind. Furthermore, when members of the patient's family also are nervous, as so frequently is the case, the rest cure, as well as any other therapeutic method which includes isolation, withdraws the patient from an environment of unfavorable psychic contagion. The recoveries which are secured by means of the rest cure are in direct proportion to the intelligent manner and thoroughness with which the technique is carried out. Even more important, however, is the personality of both physician and nurse.

Though good results are often obtained with the rest cure absolute failure is not uncommon; the patient's condition at the termination of the treatment being far worse than before. This disposition is greatly increased by poor technique, and the aggravation is due to the invalidism which failure of this method is particularly apt to occasion. Furthermore, the rest cure has such a reputation that if it fails the patient naturally infers that her disease is incurable, and her conviction that such is the case goes a great way towards increasing the resistance of the disease to treatment.

Often complaints of fatigue are uttered by hysteric patients whose manner of living is such that ordinarily fatigue would not be expected. If a patient is weary because she cannot find any object interesting enough to hold her attention, then assisting her in finding some employment which will engage her attention. and, therefore, which will distract it from herself, seems far more rational than putting her at rest in bed for at least several weeks. If the fatigue is expressed as one which is physical, the same method is applicable because this exhaustion is only the projection of ennui. If a woman becomes tired of the routine of her domestic cares, and if she cannot anticipate with pleasure the minor difficulties which she must face and overcome, then she may feel physically exhausted to the extent that she be-

lieves herself unable longer to attend to her household duties.

Besides distracting the patient's attention from herself the work cure has the additional advantage of promoting actual and normal physical fatigue with its tendency to insure more profound sleep. Exercise in the open air also is beneficial, but whatever method one adopts as a means of breaking up sedentary habits, of distracting the patient's attention, and of securing the benefits of muscular activity, it is necessary to interest the patient in the method or this special treatment not only will be fruitless but it may aggravate the condition. After the first experience with physical exercise, or manual training, the patient is very apt to rebel in consequence of the unaccustomed actual fatigue which has been induced. This difficulty can be easily overcome, however, with a few words of explanation and reassurance.

"A form of treatment," as I have written elsewhere, "upon which reliance can be placed, even in the most intractable cases of psychasthenia, is a course of private instruction in tumbling and general gymnastic work under a physical director who is especially fitted for the handling of neurotic patients. Such a man is one who treats his pupils in the same manner as an officer would treat a private soldier; one who not only will not listen to remonstrances from the patient but who will not allow such

to be made; who by the very strenuousness of his methods forces the patient to concentrate his attention upon a diversity of exercises and tumbling which he is expected to do immediately upon command and without protest. In this manner, not only does the patient receive the direct benefit of physical exercise, but he acquires self-confidence, learns how to ignore his obsessions, and his ego-centricity becomes diminished by reason of subjecting himself to the will of another.'' (Jour. of Abnormal Psychology, vol. 5, p. 1.)

Providing that the patient can be sufficiently interested to carry out the measures in a wholehearted manner any therapeutic method which tends to divert her attention from herself therefore should be beneficial. Accordingly, a restricted form of social intercourse should be encouraged; but only with optimistic friends who will not be solicitous about the state of the patient's health, and who can be depended upon to discourage unwholesome topics of conversation.

Psychic re-education comprises any explanatory and instructive means which have as their aim the education of the patient physically to react in a normal manner to any stimulus. Naturally these measures include efforts to awaken control of the emotions so that they and their physical concomitants do not tend to occur to an extent which is out of proportion

to the end to which they should be normal defensive reactions. Unless the patient acquires emotional stability recurrence of former symptoms, or the development of new ones, is to be expected. Too often physicians are satisfied with the removal of gross physical manifestations of hysteria, and in their pleasure over "curing" some distressing condition they overlook the important fact that it is only a symptom which has been removed, and that *the underlying psychopathic state has not been altered.* Consequently, it should not be a source of surprise that the patient returns, perhaps in a few weeks, to be treated for some fresh "accident" or recurrence of original ones.

Even if one is not inclined to accept the whole of Dubois' views concerning the psychoneuroses and their treatment the results which he has obtained are momentous in that they exemplify the enormous possibilities of psychic re-education associated with the more or less unconscious, but nevertheless positive, suggestive therapeutics which he denounces.

With suitable cases one can institute a course of reading which includes books that tend to impress the patient with her true relations with the outside world; ones which should decrease her ego-centricity, and which promote philosophical acceptance of the many inevitable disappointments which all must sustain. To this end one may recommend such

books as: "The Meditations" of Marcus Aurelius; the "Morals" of Seneca; the "Discourses" of Epictetus; Sir John Lubbock's "Pleasures of Life;" Helen Keller's "Optimism," and many others of like nature.

In our efforts to dissipate individual symptoms electricity is valuable. Not only is it, per se, a powerful suggestive agent, but it is a most efficient means of disguising suggestions which otherwise, being too obvious, would surely arouse the opposition that suggestion usually evokes when it is recognized as such. No one will deny that the various kinds of electricity, particularly the impressive high frequency and static breeze treatments, are capable of acting in a powerful manner upon the mind of the patient. Except by reason of its psychic effect, however, it is difficult to understand how electro-therapy can act beneficially upon a group of physical manifestations which are exclusively dependent upon pathologic mental states.

As with many other therapeutic agents the patient not uncommonly returns with the complaint that the first electrical treatment produced decided aggravation of her symptoms, or even that it originated some new, and perhaps extraordinary, phenomena. In order to attempt to avoid this event the harmless nature of what she is about to undergo must be affirmed, and constantly during the course

of the treatment she must be reassured. Then, in case aggravation does occur, we can explain that it was merely due to the natural excitement attending the first treatment with such an awe inspiring agent, and that subsequent treatments will be followed only by salutary effects. Having dissipated her fears, or even without our attempts having been completely successful, it is absolutely necessary that the same treatment should be repeated; for no matter whether it was electricity or any other agent that was followed by aggravation, if the physician yields to the patient's remonstrances he loses all control and further efforts to benefit her may be unavailing.

As patients generally expect to receive medicine some harmless remedy may be prescribed solely for its psychic effect except when some associated malady necessitates active treatment. Providing that there are no positive indications for medicine the physician would do well to refrain from giving any to those who are disgusted with the unnecessary and fruitless drugging to which they have already been subjected—and there are many such. Beside usually being without justification, routine administration of bromides, strychnine and other active drugs may be decidedly harmful. Naturally bromides are indicated for the basic malady of a case in which symptoms of hysteria are superimposed

upon epilepsy, but in the absence of this particular association of diseases bromides are worthless in the treatment of hysteria. Furthermore, bromides have a pernicious effect upon hysterics in that by reason of their sedative or stupefying effects they favor the production of dreamy or hypnoid states.

Concerning the symptom insomnia, it is best not to allow the patient to gain the impression that she is taking any medicinal agent to favor the production of sleep. If some inert preparation is given in order to satisfy her protests, and if the character of sleep improves by reason of the psychic effects of the supposed hypnotic, then the patient learns to depend upon outside assistance for the production of a state which should occur spontaneously. On the other hand, if the remedy really is a sedative a true drug habit is almost sure to be the outcome. To control insomnia let us avail ourselves of psychotherapy and of physical measures which induce actual fatigue.

As all the symptoms of hysteria are mental in origin it must be conceded that whether we employ drugs, electricity, rest cures, work cures, or undisguised psychotherapy, which is in reality the sine qua non of success with any form of treatment, the disease can be treated successfully only with methods which act through the mind of the patient. In fact one may say that most of the methods of treatment

of hysteria succeed only by reason of the skilful application of suggestion which they imply, and that with but few exceptions any system of therapeusis which is not based upon psychotherapy—including psychic re-education—must be of little value when applied to the treatment of any of the psychoneuroses.

Some physicians assert that notwithstanding the fact that they have never made use of suggestion still they have been quite successful in their treatment of hysteria. They fail to consider, however, the more or less unconscious suggestion which enters largely into the relations between physician and patient, and their success may depend almost entirely upon the use of what to them is unconscious suggestion and rational psychic re-education. This fact is amply demonstrated by the failures of other physicians who employ the same drugs and other measures but whose personalities are such that they cannot command the patient's confidence, and they are unable to arouse a favorable state of expectant attention.

As suggestion is such an important factor in the production of the accidents of hysteria the logical mode of treatment is that in which this symptomatic exaggerated suggestibility is employed for the removal of manifestations for which it is responsible. In hysteria dissociation of personality is accompanied by increased suggestibility which, in turn, is the cause of many

phenomena of the disease. Therapeutic use of suggestion tends to remove these manifestations and to effect a cure by bringing about synthesis of the dissociated elements.

In a bacterial disease the microbes elaborate a toxin which reacts upon the organism to produce degeneration of the tissues and symptoms of toxæmia. Graduated application of autogenous vaccines not only leads to disappearance of the symptoms but also to cure of the disease and immunization of the patient. In reply, therefore, to the contention that by means of an artificially induced hysteric state we presume to cure hysteria one has only to refer to the successful application of the same mechanism in what is known as vaccine therapy.

Besides psychic re-education and the analytic method of Freud the psychotherapeutic methods employed for the removal of various symptoms consist in suppression, substitution, and revelation.

With or without the induction of what is commonly known as the hypnotic state a symptom may often be suppressed by means of suggestion alone, but in itself this does not constitute cure of the disease. Briefly, the result is obtained merely by affirming that the manifestation has disappeared, or will disappear shortly, and if the patient has sufficient confidence in the physician, or if the physician has sufficient command of the patient to enable him

to override her passive resistance, the symptom vanishes.

The method of substitution, originated by Janet, consists in reproduction during hypnosis of the pathogenic memory complex, and then substitution of a different series of associated ideas and a different outcome. For instance, when recurrences of crises are due to pathologic association of ideas consequent upon a certain kind of stimulus, and each crisis is a repetition of the reaction to some former mental stress, then in place of the former complex the physician substitutes a pleasant series of ideas to be aroused by whatever acts as the hysterogenic stimulus.

The method of revelation, a form of psychic re-education, depends upon demonstration to the patient of the psychic nature of the symptoms in the hope that this will suffice to cause them to disappear. Thus, in case of monocular amaurosis the optical inconsistencies of the results of tests can be adduced in order to convince the patient that she really sees with her blind eye.

As the manifestations of hysteria are dependent upon dissociated or submerged complexes a patient really is not cured until we have effected synthesis with consciousness of what has been pathologically dissociated. This limitation becomes more obvious in connection with the most highly developed type of

hysteria—multiple personality. No matter how perfect the results of treatment of a case of dual personality may seem surely the personality which we have secured is not what might be termed normal unless the patient is capable of remembering what occurred during periods of the secondary state. Consequently, it is of the utmost importance that the cause of each manifestation be discovered, for no matter how bizarre they may seem each originated from some unpleasant experience whose nature must be ascertained before treatment can be instituted in an intelligent manner.

The most logical and effective form of therapeusis includes the discovery, by means of some psycho-analytic method, of the causal submerged complexes; synthesis of these with consciousness; and, through the agency of psychic re-education, the removal of psychopathic tendencies.

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